A PRACTICAL DISSERTATION ON *BATH-WATERS.*

TREATING

Of the Antiquity of Bathing.
Of the Original of Springs.
Of the Cauſe of the Heat of *Bath*-Waters, and of their Ingredients.
Of Drinking *Bath*-Waters.
Of Bathing.
Of the City of *Bath*, its Situation, Baths, *&c.*

Deſign'd for the Uſe of the NOBILITY, GENTRY, *&c.* who reſort to the *Bath.*

By WILLIAM OLIVER, M. D. & F. R. S.

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TO THE KING.

SIR,

IT was a Custom with the *Romans*, when they were Masters of *Great Britain*, to dedicate our *Bath-Waters* to *Minerva*, the Goddess of *Wisdom* and of *War*, who had her Temples and Altars erected near them: And if the Christian Religion allow'd such Consecrations, Your Majesty might justly expect the same Reverence wou'd be paid to your Great Name; such an unbounded Veneration have all Good

Men for Your Majesty's Fortitude and Wisdom, and those Eminent Virtues by which Your Character is so illustriously distinguish'd. But there seems to be a particular Reason, why these Fountains shou'd have been Sacred to Your Majesty; since as Almighty God was pleas'd to open them in our Land, for a common Remedy against bodily Infirmities and Diseases, so his Providence has miraculously brought Your Majesty among us, to heal us in a far nobler Sense, and cure the distemper'd Minds of an exasperated and divided People, and recover them to their right Understanding.

Your Majesty, like a real Champion of your Country, has already in a great measure trampled under your Feet that old Dragon and Hydra of Faction, Rebellion and Popery, which ever since the Reformation

mation have been always endeavouring our Deſtruction. It was Your Majeſty's peaceable and happy Acceſſion to the Throne, by the undoubted and divine Right of the Conſtitution, that under God hath ſav'd us, in ſuch a Juncture of Time, when the Prieſts of *Baal*, and the Sons of *Belial*, laid their Heads and Hearts together, and took Counſel how to deſtroy our Religion and Laws, in order to ſubvert the beſt Eſtabliſh'd Government in the whole World. Your Majeſty is that *Ordinance of Man*, which St. *Paul* and St. *Peter* both *command* us to ſubmit to, *for the Lord's ſake*, and that on *pain of Damnation*. Let the Unthinking among us, who delight in Tumults and Rebellions, as Enemies to Peace, pleaſe themſelves with thoſe Phantaſtick Notions they have ſet up, contrary to the poſitive Laws of

of God and Man, to the Ruin of themſelves and Families. Let them ſtill look on *France* and *Rome* as Guarantees of the Independent High Church they affect, that they may erect an Inquiſition among us, as there is in thoſe Countries where Jeſuitiſm and Superſtition prevail.

But let all honeſt Men heartily love and honour Your Majeſty, and Your Family, and continue firm and ſincere Friends to the Conſtitution; and may Your Majeſty's Endeavours for the Publick Welfare be ſucceſsful, and your Reign over us long and happy. I am,

YOUR MAJESTY'S

Moſt Dutiful, and

Moſt Devoted Subject

and Servant,

WILLIAM OLIVER.

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THE

THE
INTRODUCTION.

WHAT the antient *Poets* feigned of their *Nectar*, or Drink of their *Gods*, may be truly said of our *Bath-Waters*; That they are not only of a delicious *Taste*, but also of admirable Use for the Preservation of *Health*: Like the *Water* of *Life* in the *Revelation*, *clear as Crystal*, designed by *Heaven* for the *Healing* of *Nations*. It has always been reckon'd as a *Blessing* to any People, that their Country abounded with Fountains, Springs and Rivers. These were had in great respect among the antient *Egyptians*; and a *Pitcher* fill'd with

Water, and cover'd over, was their *Hieroglyphick* for *Health* and long *Life*. The learned *Pagans*, as well *Greeks* as *Romans*, invoked their Fountains and Rivers as their *Gods*, or at leaſt they thought they had their conſtant abode there:

—*Nunc ad aquæ lene caput ſacræ.* Hor.

And we are told in Hiſtory, that the Fathers of the old *Britiſh* Church, the *Druids*, inſtituted a Worſhip ſomething like this here in our own Country; preſuming, as I ſuppoſe, that Springs and Fountains, Rills and Rivulets, were the true *Naides* or Nymphs, the legitimate Daughters of their great *God*, the *Ocean*:

——— —*Illa precatur*
Oceanumque Patrem Rerum Nymphaſque Sorores. Virgil.

Now that which gave Occaſion for the eſtabliſhing this Deity, was a very antient Opinion among Philoſophers, that Water was the *Panſpermia*, or Parent

Parent of all Things, the *Materia Prima* that had no Form of its own, but was ſuſceptible of all *Forms*, from the Aptitude of its Parts to inſinuate themſelves and be aſſimilated into any Body whatſoever. But then medicinal warm Waters were more profoundly reverenc'd, as the peculiar and ſpecial Care of Providence, the Cheriſhers of *Health*, and the Support of long *Life*; being deſigned, by their Humidity and Warmth, to reſtore our *Radical Moiſture*, when ſpent, and recruit our *native Heat*, when languiſhing or decaying through Infirmities or Age. Of this kind are the *Waters* I am now about to treat of, the proper Practical Uſe of which, and the Way of their Operation, ſhall be my chief Care, troubling my Reader as little as poſſible with Speculations or Diſputes; becauſe I am of Opinion, they ſignify little, or are of no moment to the World, whether they are true or no.

A

Practical Diſſertation

ON

BATH-WATERS.

CHAP. I.

Of the Antiquity of Bathing.

WHEN Bathing began to be of Uſe, or who firſt recommended it to Mankind, no Records, that I know, mention, or afford us any Light to find them out. Probable it is, Men's Curioſity and Reaſon put them firſt upon making the Experiment. It is very natural

natural for us to believe Rational Creatures, when they found their *Blood* heated by the ſcorching Sun-Beams, ſhould ſoon imagine, that *Bathing* in cold Water muſt clean, cool, and refreſh them; as alſo by a parity of Reaſon, that warm *Baths*, in weak and cold Conſtitutions, muſt ſtrengthen, comfort, and relieve them. Thus by Uſe and Obſervation from repeated Experiments of this kind, Men became by little and little better acquainted with the Virtues and Advantages of both Hot and Cold Baths. Certain it is, we find frequent mention of Bathing in *Holy Writ*. And *Homer* *, one of the oldeſt Profane Authors we have, tells us, That *Ulyſſes* and his Comrades bathed firſt in the Sea, and next in warm Water, to refreſh themſelves after a Fatigue, before they dined. That Baths have been of very antient Uſe in the *Eaſtern* Countries, is atteſted by *Plutarch*, *Strabo*, *Diodorus Siculus*, *Pauſanias*, and moſt of our antient Hiſtorians and

* Iliad. 10.

Poets, who make frequent mention of them in their Works. The modern Authors alſo of Note in Phyſick, *Andr. Baccius de Thermis*, *Mercurialis* in his *Gymnaſticks*, and the old Authors *de Balneis*, are full of Inſtances of the Uſes the Antients made of their Cold, Temperate, and Hot Baths.

The *Romans* in a more eſpecial manner greatly improv'd this part of *Phyſick*; very noble and magnificent Publick Baths were erected at the Charge of their Emperors, who bathed in Publick frequently among the People, to ingratiate themſelves with them. Some of theſe Baths are ſaid to be ſo large, that they reſembled great Cities *; and if we can believe *Ammianus Marcellinus*, they were of that Extent, as to deſerve the Name of Provinces. It was upon this Account *Agrippa* built 170 Publick Baths in *Rome*, at his own Charge, for common Uſe. And *Pancirollus* tells us, there were 856 Baths at *Rome* at one time. † *Proſ-*

* Vid. Pancirol. de rebus deperd. & invent. *p.* 93.
† De Medicina Ægyptorum, *lib.* 3. *cap.* 16.

per

per Alpinus, who liv'd at *Grand Cairo* ſome Years, acquaints us, that the Inhabitants there had a great many very magnificent Structures for Bathing, which were much frequented by the *Egyptians*, when he was there. We are alſo very well aſſured from Travellers, that all over *Turkey*, Baths are of great Uſe among the *Mahometans* to this day. Nor are our antient Phyſicians ſilent in this Point, as we may be ſatisfy'd at large in the Works of *Hippocrates*, *Galen*, *Ætius*, *Tralianus*, &c. where the manner of Bathing in all their different Baths is very amply deſcribed.

CHAP. II.

Of the Original of Springs.

I Shall not in this place philoſophically conſider Water as an Element, or a humid Body only; there being but one univerſal Matter infinitely diviſible, the only Element in Nature, out of which all Things are made according to the ſpecifick and

determined Motions impreſſed on it by the firſt Mover of all Things, which denominate it of this or that Species of Beings. So Matter, conſider'd as ſuch, by one Motion becomes Water, and by the Variety of Motions given it, will become Earth, Stone, Tree, or Animals: and into this univerſal Matter all Things are reduc'd at laſt, when they have quite loſt their Specifick Forms, which gave them their firſt Denomination; of which we have a large Philoſophical Account in *Ovid:* the four Elements being ſuppos'd by the Antients to be the firſt Principles out of which all Things were made, and into which all will at laſt be reſolved.

Nec Species ſua cuiq; manet. Rerumq; Novatrix
Ex aliis alias reparat Natura Figuras.
Nec perit in tanto quicquam mihi credite Mundo,
Sed variat Faciemque novat: naſcique vocatur
Incipere eſſe aliud quam quod fuit ante morique,
Deſinere illud idem.——

Ovid Metam. lib. xv.

I ſhall then here conſider it only as an Heterogeneous Body, ſuch as we find it in Springs and Fountains.

In the next place, Authors who treat of the Origin of Springs and Fountains, obſerve two ſorts of them.

Firſt, ſuch as are Temporary, often dry in Summer, becauſe they lie near the Surface of the Earth.

Secondly, Perennial, ſuch as in Winter and Summer, wet or dry Seaſons, are always the ſame, not at all alter'd as to Quantity or Quality, becauſe they lie very deep in the Bowels of the Earth, and cannot at all be affected by the ſcorching Sun-Beams, they being out of their reach. Of this laſt ſort our Bath-Waters, my preſent Subject, muſt be reckon'd; for in the drieſt Summer, or in the moſt dropping Winter in the Memory of Man, they have always remained the ſame. Now there are various Cauſes of Springs aſſigned by Authors, which are next to be conſidered. Some are of Opinion, they proceed,

1*ſt*. From Caverns and Lakes under Ground, which by ſubterraneous Fires,

may aſcend in Steams or Vapours, and by the cold Rocks near the Superfice, be condenſed into Water, and form themſelves into Springs and Rivers.

2dly. From Rains and Snows melting from the Tops of Mountains, and falling down through the Clefts of Rocks.

3dly. From Vapours condenſed by the ſides of high Mountains, as Mr. *Halley* thinks, from ſome Obſervations he made at *St. Helena*.

4thly. From ſome hidden Paſſes in the Earth, through which the Sea ſoaks into its Pores, as Water through a Sponge or dry Cloth, leaving its Salt behind it; ſo being, as it were, one *Continuum*, Water ſtill puſhing on Water, by its own Weight, and impulſion of the circumambient Air, as through a Schyphon, being once in motion, may be convey'd to the tops of the higheſt Mountains. And thus by Filtration only, the Nouriſhment, Vegetation, and Augmentation of Gems, Stones, Minerals, and all ſubterraneous Bodies, as well in the Bowels of the Earth, as on its Superficies, are

are by Nature conſtantly and ſteddily carry'd on. The Salt in the Water left behind, ſupplying what the watry Vehicle waſhes off in its Paſſage; Salt being the Medium between Earth and Water. And this will ſeem the more probable, if it be true, that the Sea near the Equinoctial, is much higher than at the Poles, and that its Superfice is higher there, than any Mountain in the World. Beſides, many are of Opinion, that the Center of the Earth's Gravity, and that of its Magnitude, are not the ſame, but at ſome diſtance one from the other; and if ſo, it will not be very difficult to account, how Water may riſe to the height of the higheſt Mountains, only by its own Weight or Gravitation, without any external Force at all.

5*thly* and laſtly, 'Tis probable the Earth, as all other ſolid Bodies, has its Perſpiration or Atmoſphere, from its whole Superficies, whoſe Vapour or Moiſture being check'd near its Surface, by Cold, may be condens'd ſo as to cauſe Springs.

This,

This, perhaps, may ſerve to ſolve a very odd *Phænomenon* in Nature, that happen'd in the Year 1683, during the hard Froſt here in *England*: for Mr. *Ray* *, that curious Inquirer into Nature, tells us, that he had obſerved at that time, all the Springs about him in the Country broke out, and ran more plentifully than they uſed to do at any other time, tho very wet Seaſons.

Now theſe are the Speculations and Notions of Philoſophers upon this Topick, ſome conteſting for one, and ſome for the other, as the original Cauſe of Springs. For my part, deſigning chiefly what is practical, and to accommodate theſe Waters to the proper Uſes deſigned by Nature, in their Compoſition, to the common Exigencies and Infirmities of Mankind; I ſhall not enter the Liſt, by way of Diſpute with any body; contenting my ſelf only with giving you my Opinion upon the whole, That the primary and original Cauſe of all

* *Miſcellaneous Diſcourſes*, p. 91.

Springs

Springs is the Sea, into which all the Rivers run, as into the Place from whence they came *(per modum Circulationis)* as the *Preacher* tells us. And thus all the other Cauſes mention'd, may be allow'd to be Secondary, and Subordinate, or rather the ſeveral ways Nature takes to make out of ſalt Water ſweet Springs.

CHAP. III.

Of the Ingredients in the Bath-*Waters.*

IT may not be amiſs here to obſerve, let the Cauſe of Springs be what it will, that in all probability medicated Waters, ſuch as we are treating of, owe their Virtues to ſome Mineral Salts, or imperfect metalline Subſtances, *in Principiis ſolutis in ſuo Primitivo*, they meet with in their way; which they are impregnated with, not far from the place where they break out. Now as ſome Parts of the Creation have attained to their Perfection, ſo other Parts will always be

be *in fieri*, or *in via ad Generationem*, in the way to Perfection or Generation; whereby our *Bath*-Waters will never fail of their Heat and Virtues, as the learned *Jorden* tells us. Thus medicated Waters are formed, according to *Ariſtotle* *, *Tales ſunt aquæ, qualis eſt natura eorum per quæ tranſeunt*; that Waters partake of the Nature of the Places through which they paſs. And *Galen* tells us †, *Quæ exactè & ſincerè Aqua eſt, ſi per bituminoſa, ſulphuroſa*, &c. *Loca decurrit, Subſtantiæ aliquid abſterſerit ſecumque traxerit*, &c. that is, the moſt ſimple elementary Waters, if they happen to paſs through bituminous or ſulphurous Places, are impregnated with and carry off ſome of their Particles with them. I do not deſign in this place, to give you an exact Analyſis of theſe Waters; their component Particles are ſo intimately and perfectly united and blended together by Nature, that no Art will ever be able, I am of Opinion, to

* Lib. de Senſil. Intenſil.
† Lib. de Simpl. Med.

make

make any accurate ſeparation of their Ingredients, or to imitate them. And theſe are all here *fractis, imminutis, & debilitatis Viribus* *; and the Virtues of theſe Waters are not owing to any one, but to all the Materials together in an unimitable Compoſition. They are compounded of a neutral Salt; or, as *Blundell* calls it, in his Treatiſe of the *Baths* at *Aken* in *Germany*, a Chaos of Salts; that is, ſeveral ſorts of Salts mix'd together, as perhaps Sal. Gem. Nitre, common Salt, and Vitriol, beſides Sulphur, Bitumen, Steel, Earth, Ocre, or Freeſtone and Water. By Water is meant ſimple common Water, that has neither Smell nor Taſte, clear, tranſparent and light, is very probable.

But what quantity of theſe Ingredients are imploy'd in this grand Compoſition, is, and I believe ever will be, an inſuperable Difficulty to find out. Moſt certain it is, they are very few, and the Waters of our Baths little more, than what we call Elementary;

* *Guidot*, p. 40.

having

having no Taſte or Smell when cold. Now all the Subſtances, both Metalline and Mineral, procured by ſeveral Experiments of Diſtillation and Evaporation, make not above the three hundredth Part of the whole Quantity, and but a third Part of all theſe Ingredients are Saline, as Dr. *Guidott* has obſerved, Page 46. That there is a *Gas* in them, or an exalted Vitriolick Steel, may eaſily be prov'd by our Senſes; becauſe, while warm, we can taſte and ſmell it: as alſo from the Iron Works round about the *Bath*, which are very viſibly corroded and conſumed by it; ſeveral Inſtances of which, any one may ſee on the place, that has a mind to ſatisfy his Curioſity. But this is of ſo fine and ſubtile Parts, that 'tis quite loſt when cold, tho never ſo well ſtopp'd or Hermetically ſeal'd up in Glaſs, which like the *Effluvia* of the *Magnet*, paſs and repaſs every where, being of too volatile a Nature to be confin'd; *Tanquam Gas ſulphureum Vini in nullum Corpus reducibile*, as *Becker* has it *. And I am apt to

* Phyſic. Subterran. *p.* 9.

believe,

believe, whoever ſhall at any time endeavour to collect it, will perhaps ſucceed little better than *Cornelius Drebble* did, who endeavour'd to diſtil out of ſeveral Bodies, and bottle up the *Anima Mundi*, or Soul of the World. This is that Acid that gives the Purple Tincture, when mixed with Galls warm from the Pump; which it will not do, when cold, or taken out of the Baths; becauſe having been expos'd there to the open Air, it has loſt the Acid Spirit that was in it.

And I am very much miſtaken too, if it be not a very hard task to prove, that the Quantities of Salts, Sulphur, Earth, Water, *&c.* which Chymiſts find in them after Diſtillation, are the very ſame which Nature imploy'd in their firſt Mixture or Compoſition. Every body knows, that has any Notion of Chymiſtry, that the Operation of Fire upon Bodies, makes great changes in their Textures; inſomuch, that ſometimes they alter their very Hypoſtatical Principles, (as the Chymiſts are pleas'd to call them) and produce ſomewhat new, and of a different

ferent Nature and Texture from what they were before. Thus Stones and Minerals alter their Nature quite, when by a ſtrong Fire they are vitrify'd and run into Glaſs; whoſe Metal, tho very tough while hot and melted, yet 'tis well known nothing can be more brittle, than it is when cold. What Alkaline Salts are in our Waters, I know not; but that the Sand in them is of an Alkaline Nature, may be evident from its Fermentation with the Juice of Lemons, an Experiment I have made my ſelf, and know to be true. Nor is this Sand become Vitriolate, as Dr. *Guidott* affirms it will in time, having had mine by me above ſix Years; it ſeems rather to be only the Powder of Free-Stone in them, according to the learned Dr. *Jorden*, who thinks theſe Waters owe their Heat to this Powder, which he ſuppoſes is the Mother of the Fermentation, as the Acid is the Father. And the ingenious Dr. *Liſter* * is of Opinion, our *Bath*-Waters have

* Cap. 9. de Font. Med. Ang.

their

their Heat, *à Pyrite & Lapide Calcario vegetantibus.* Theſe Conſiderations diſcourage me from being too nice in my Inquiries, what the Ingredients of theſe Waters are, and the Experiments already made by others ſhall ſatisfy me. I wave all doubtful Speculations, as of little uſe in Phyſick; all the Curioſity I have, or pretend to, being only to know practically what Effects they have on the Conſtitutions of Mankind: and I am perſuaded the only true way to recommend them to the World, is by practical Experiments, and judicious Obſervations made upon their Uſe.

CHAP. IV.

Of the Cauſe of the Heat of the Bath-*Waters.*

THE Cauſes of Things lie very deep in *Democritus*'s Well; and, as the Poet ſays, he muſt be allowed by

by all Men to be a very happy Man, that knows how to find them out:

Fælix qui potuit rerum dignoſcere Cauſas.

I am not ignorant the graveſt Authors that have taken pains to proſecute this Argument, in order to find out the true Cauſe of the Heat of Hot Springs, have been at a loſs, and not a little nonplus'd and puzled at the ſtrangeneſs of ſo ſtupendous a *Phænomenon*. 'Tis very hard for the moſt profound *Myſtæ* in the Works of Nature, to conceive how an actual Heat, conſtantly the ſame in all Seaſons of the Year, ſhould be ſo ſteddily perpetuated and preſerved through ſo many Ages, as I think is plain from Hiſtory and Tradition, theſe Waters have been. And after all, they remain a Myſtery ſtill to all the nice Inquirers into Natural Knowledg, who are not yet agreed among themſelves what may be the moſt probable Cauſe of their Heat. That this is the Caſe of hot Springs in general, ſeems to me very apparent from the variety of Opinions that

that Philoſophers have held, and the Doubts and Diſſenſions that have been rais'd about them, and our *Bath*-Waters in particular. I ſhall not therefore be very poſitive in my Aſſertions upon this Head, where the Subject is ſo abſtruſe and diſputable. Some derive their Heat from the Sun and Stars: others think it is produced by ſome particular Putrefaction in the Bowels of the Earth: others attribute it to Lightning, ſubterraneous Fires from the Center of the Earth, where there is, they ſay, a conſtant Fire, which is conveyed by ſome open Paſſages to the large Veſſels that contain them, as they ſuppoſe. And this is prettily expreſs'd by *Neccham*, an *Engliſh* Poet, four hundred Years ago, in a Copy of Latin Verſes on our Baths.

Igne ſuo ſuccenſa quibus data Balnea fervent,
Ænea ſubter aquas Vaſa latere putant;
Errorem Figmenta ſolent inducere paſſim:
Sed quid? Sulphureum novimus eſſe Locum.

Or

Or laſtly, others aſcribe the Cauſe of the Heat to Fermentation, from the inteſtine Motion of its Heterogeneous Particles; ſuch as happens to Chymiſts, when Acids and Alkalies are mixt together.

I ſhall not entertain my Reader with the Detail of all theſe Suppoſitions; contenting my ſelf only with the two laſt, which I think chiefly deſerve to be conſider'd in this place.

That ſubterraneous Fires are the Cauſe of the Heat we find in our Mineral Waters, is maintain'd by grave Authors. We all know there are ſuch ſubterranean Fires at *Hecla*, *Veſuvius*, Mount *Ætna*, &c. but that this is not our caſe at *Bath*, I humbly conceive for theſe Reaſons following.

1. It is hard to imagine a Fire ſhou'd burn here ſo long under-ground, and never break out any where, as the burning Mountains do. Fire muſt have its *Spiracula* or Vents, or elſe it will be ſtifled it ſelf and ſoon go out, when neither its Flame, nor its Smoke can be diſcharg'd into the Air; or elſe muſt neceſſarily, according to the Courſe

Courſe of Nature, being pent up in the Bowels of the Earth, occaſion great Noiſes there, or diſmal Earth-quakes.

2. Fire muſt have its Air too, continually to agitate and fan it, ſo that the ſmall Particles of Matter be always kept in a very brisk Motion or Agitation, or elſe it will ſoon be extinguiſh'd; Fire being no more than a vehement inteſtine Motion of the ſmall Particles of Matter, deſtroying the Union and Mixture of Bodies. Now 'tis eaſy to ſhow, how the burning Mountains may be ſupply'd with Air, the Ground for a good ſpace round being warm'd, parch'd, and cleft in many Places, having alſo many holes which may, no doubt, ſupply thoſe Fires with Air enough to continue them burning, and give Vent to their Flame and Smoke. But no Footſteps of any ſuch thing appear near the *Bath*, that I know or ever heard of, that can cauſe any thing of this nature. 'Tis true, the Country about *Bath* abounds with Pit-Coals; but that they ever broke out into a Flame any where,

where, is not recorded or known; nor are there any internal Noiſes in its Bowels heard, or was it ever ſubject to Earthquakes more than any other Parts of this Iſland. And I am inclin'd to ſuſpect, for want of a Communication of Air only, our Sulphurous, Bituminous and Vitriolick Earths are but heated, and thoſe fiery Particles ſmother'd; which had they Air to fan and briskly agitate them about, would ſoon break out into Flames, like a Stack of Corn or Hay not well ſaved. The ſame thing *Agricola* * tells us, happens now and then in a Mountain in *Miſnia* in *Germany*, near *Zwikau*; where the Inhabitants are obliged to ſtop up all the open places, by throwing in the Earth, in order to prevent its breaking out into Flames.

3. Were Subterranean Fire the Cauſe of this Heat, I am of Opinion our Waters would be ſometimes hotter, ſometimes colder, and that they would not always continue to be of

* Lib. de Foſſilibus.

one

one equal Heat: for the Fires in all the Places mention'd, burn not ſteddily with one conſtant tenour, but are ſometimes hardly diſcernible, tho at other times they break forth with a great deal of Fury and Noiſe, as there is more or leſs Fuel to feed them, or Air to agitate them. Beſides, if the Sun it ſelf, which is the brighteſt and moſt furious Fire we know, has not only its *Maculæ* or Spots, which vary often, as the accurate *Scheiner* has obſerv'd in his Opticks, but has alſo appear'd with a very dim and dusky Hue for ſeveral Days, nay Months together, as *Pliny* and *Cedrenus* tell us: How then is it to be conceiv'd, any Subterraneal Fire can burn thus ſteddily, without any ſigns at all of Flame or Smoke, or Earthquakes, with the ſame degrees of Motion and Heat at all times? And if not, how comes it to paſs, that our Waters at *Bath*, Winter and Summer, are always the ſame, with reſpect to their Quantity, Quality and Heat?

4. I humbly conceive, that if Subterranean Fires were the Cauſe of the Heat of *Bath*-Waters, the Mixtures

would have been confus'd and turbid, the combuſtible Matter would mix with them and foul them; ſo that they could not be of ſo grateful and pleaſant a Taſte, at leaſt while they are warm. Whereas at preſent, by the peculiar Cookery of Nature, they are not only of a very agreeable and delicious Taſte, but alſo of a fine clear Cryſtal Colour, like Rock-Water: Perhaps much after the ſame manner as our Wines, Beer, and other Liquors, by Fermentation, throw off, or precipitate to the bottom, the Heterogeneous Particles, and ſo in time fine and clear themſelves.

Theſe Conſiderations inclined me, I muſt confeſs, to believe they rather owe their Heat to Fermentation; becauſe I can eaſily imagine, how from a Mixture of different Salts diſſolv'd in Water, with other Ingredients conſtantly ſupply'd by Nature from their proper Seminaries, may follow ſuch a Fermentation and Heat; *Ex motu fit Calor*: and ſo according to the Degrees of Fermentation, and inteſtine Motion of the Parts, will the Heat be more

more or leſs. Let us, for brevity ſake, conceive the Matter thus. Suppoſe then, that in the Bowels of the Earth there be a great Quantity of Sulphur or Bitumen mix'd with Mineral Steel; ſuppoſe alſo Water paſſing through this Bed of Sulphur and Steel, the Vitriolick Acid of the Sulphur will be ſoon diſſolv'd; which by inſinuating it ſelf into the Pores of the Bitumen and ſulphurous Mineral Steel, may cauſe a very great Heat; which, if the Earth be porous, and a ſufficient Quantity of Air be admitted, to put their ſmaller Particles into a brisk Motion, may alſo end in Flames; as I take it, is the Caſe of the burning fiery Mountains, *Ætna*, *Veſuvius*, and other Places of that kind. This may be illuſtrated, I think, very fairly by the Experiment of common Sulphur and Steel; which being pouder'd and mix'd together in equal Quantities, with common Water, will produce no inconſiderable Heat, being firſt well ſhook together. And here you will find, in about twelve Hours, the whole Maſs will become frothy, and

the Heat ſtrong enough to break the Glaſs: its Colour, that before was Yellow, turns Black, and the Maſs compacted and hard. Take this out of your Glaſs, pound it into groſs Pouder, and leave it open to the Air; and you ſhall ſee, in a little time, it will not only be much hotter than it was before, but viſibly break forth with a ſulphurous Flame. This ſeems to me to amount almoſt to a Demonſtration, how Subterranean Fires may be kindled in the Bowels of the Earth, and alſo hot Springs from one and the ſame Cauſe. Much like this happens, when you expoſe to the open Air *Marcaſites*, or ſulphurous Earths, out of which you make Vitriol; which in a very little time will grow very hot. And ſo will the black *Caput Mortuum*, which remains in the bottom of your Veſſel when you ſublime Sulphur; for this alſo broken a little, and ſet in the open Air, will grow too hot for your Fingers. And in the Mines in *Bohemia*, we are aſſured from very good Authors, their Pit-Coal which abounds with alluminous Salts, being expos'd only

only to the Air in a heap, will not only grow hot, and ſend forth a ſulphurous Fume, but actually inflame. So that we have little need, I think, of any other Inquiry, to find out *Acid* and *Alkaly* in thoſe Waters, as the Cauſe of their Heat, or any *Calx Viv.* or burnt-Lime (which I never heard of any where in the Bowels of the Earth) to favour the Opinion of ſome Chymiſts, *viz.* That no Materials mix'd can raiſe a Fermentation, but what have firſt paſs'd the Fire, and been by it calcin'd. 'Tis true, any Acid and Alkaly mix'd together will do the ſame, as is well known; and the Spirit of Nitre, and Oil of Turpentine, Cloves, or the like Aromatick Oil, mix'd together in a Glaſs-Vial, will actually inflame, almoſt in an inſtant. And this I take to be the reaſon, why our *Bath* Water keeps its Heat ſo long, *viz.* ſeventeen Hours, or more, as Dr. *Pierce* has obſerv'd, tho in froſty Weather, and in a Place where the Window was left open all Day; which no Water heated to any degree, by Fire,

will do *. From whence the Doctor learnedly concludes (in the place aforeſaid) 'That this proceeds not 'from any extraneous Heat, as that of 'under-ground Fires, but from ſome 'Mineral Particles rather within it 'ſelf; which till they are evaporated, 'continue the Water more or leſs 'warm. And theſe Mineral Parti-'cles partly ſtick cloſer to the little 'Globules, that make up the conſiſ-'tence of Fluids, than thoſe commu-'nicated by Fire could do.' The Sieur *d'Ayglun*, or Monſieur *Rochas*, in his Treatiſe of Mineral Waters, printed at *Paris* in the Year 1635, has given us the moſt ſatisfactory Account of this matter, I ever yet met with any where. 'This Gentleman being a 'very ingenious Virtuoſo at that time, 'had the Curioſity, he tells us, to at-'tempt the finding out the Cauſe of 'a hot Spring he met with in the 'Mountains of *Savoy*, and the nature 'of its Contents. In order to this, 'he got Work-men to dig into it, and

* *Dr.* Pierce *in his Preface to his Memoirs.*

'trace

'trace it to the Original; which in 'fifteen Days time they found. And 'here, ſays he, the Water was very 'hot, boil'd and bubbled up mightily, 'caſting off a great deal of Scum from 'it. Digging on three days longer, 'the Water was quite cold, tho one 'continu'd Stream with the former, 'and very different from it in Taſte.' Upon this he comes to this Judgment of the matter, That the ſame Water was Hot and Cold, according to the Place it paſſed through; that this Earth where the Heat was, could be nothing elſe but a Mine of Sulphur, (which every body knows abounds with Steel) and that the Water had in it an Hermetick Salt, whoſe Nature he would not determine. Hence he thinks it very rational to believe, the Spirit contain'd in theſe Waters, piercing into the Subſtance of the Sulphur, caus'd that Ebullition and Heat, juſt as Water caſt on quick Lime.

Purſuing his Enquiries farther, in twelve Days time more he met with pure ſweet Fountain-Water. This is

that Author Dr. *Pierce* mentions in his Preface to his *Bath*-Memoirs. He was a Man of conſiderable Wealth and Parts, and can hardly be ſuppos'd to impoſe upon the World. He is an Author very well worth reading in *French*, or as you find him in the end of the ſixth Volume of *Theatrum Chymicum*, tranſlated into Latin. I know very well many are of Opinion, nothing grows hot by Fermentation, but what has paſs'd through the Fire firſt, as all our Alkaline Salts have; as Salt of Tartar, Salt of Wormwood, *&c.* are well known to be Chymically prepar'd by Fire. But that there is alſo an Alkaline Earth too, that mixes with theſe Waters, is demonſtrable from the *Bath*-Sands; which, mixed with an Acid, ſoon ferments and grows hot, as I have ſaid before. The Learned *Frederick Hoffman*, in his *Diſſert. Phyſ. Med.* p. 235. thinks there is an Alkaly not only in *Bath*-Waters, but in *Spaw*'s too; which he thinks is the reaſon they ferment, when mix'd with Rheniſh-Wine: That the Nitre of the Antients was

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a pure Alkaly; that there is an Earth found near *Smyrna* with a great deal of Alkaline Salt in it, which, by the help of Water, they firſt diſſolve, and then evaporate for the Salt. And he alſo obſerves, that all hot Springs abound with acid Springs near them; which mixing with bituminous Earths, are the Cauſe of their Heat. This is well known at *Bath*, where the Cold-Springs in and about the Town are all harſh and acid.

But how ignorant ſoever I acknowledg my ſelf to be, after all my Enquiries, the Experiments I have made, the Books I have read concerning hot Springs, and eſpecially thoſe that treat of our Baths; what the particular Ingredients are, which compoſe them, as alſo what's the Cauſe of their Heat: yet I make no ſcruple at all to tell the World, upon my own Experience on my ſelf and others, for about almoſt twenty Years, that I can never enough admire their Divine Compoſition; and muſt think it one of the greateſt Bleſſings God has beſtowed upon the Inhabitants of this Iſland, that we have

ſuch Balſamick healing warm Springs, as our *Bath*-Waters are allow'd to be, to reſort to upon occaſion; which are ſo great and noble a Remedy, in moſt of the Chronick Diſeaſes that afflict Mankind. And this is very evident every Year from the extraordinary Cures performed upon the Place, of ſuch Maladies, which were ſuppoſed deplorable, if not incurable by any other Method.

CHAP. V.

Of drinking Bath-*Waters.*

Pauſanias tells us of hot Waters near *Cardia*, that were pleaſanter to drink than Milk *. The ſame Author ſays, in his eighth Book, That in *Arcadia* there was a Spring, whoſe Water drank, was an infallible Cure for any Bite of a mad Dog. And *Vitruvius* †, that great Architect and Philoſopher, ſays, ſome hot Waters are

* Comment. lib. 4.
† Architectur. lib. 8. cap. 3.

pro-

proper to drink, and others to bathe in. *Hippocrates*, &c. commends the Uſe of warm Waters inwardly *. *Scribonius Largus* commends Steel-Waters inwardly for an Ulcer †. *Ætius* ‖ aſcribes very great Virtues to the Uſe of hot Waters internally. *Galen* commends hot Waters as Cleanſers of our Bodies **; *Ægineta* for the Leproſy; *Trallian* for the Cholick; *Avicen* for Obſtructions and inward Weakneſſes. *Archigenes* in *Ætius*, cries up the Virtues of Mineral Waters, inwardly taken, as very great in Ulcers of the Bladder, and ſeveral other Caſes. And *Baccius*, *Fallopius*, *Mercurialis*, and many other Moderns, in their Works, have all recommended the Uſe of hot Waters internally, in many Caſes. To conclude my Authorities for the Antiquity of drinking medical Waters, *Henricus ab Heeres*, *Blondel*, and Monſieur *Aubery*, tell us, the Spaw-Waters in *Germany*, the warm Wa-

* Lib. de Aere, Aquis, *&c.*
† Cap. 146. ‖ Tetra 1, Serm. 3. c. 155.
** Lib. 4. de Sanitat. tuend.

ters

ters at *Aken*, and thoſe of *Bourbon* in *France*, have been drunk time out of mind. But we can't affirm the ſame of *Bath*-Waters: for tho they were drank in Dr. *Jones*'s time, as we ſee in his *Baths* of *Bathe*'s Aid, *p.* 28. who wrote about one hundred and thirty Years ſince; yet very few drank them about three and thirty Years ago, when I was there; and moſt People came thither only to bathe, probably from ſome conceiv'd Prejudice, that the Ingredients in our Waters conſiſted of Particles injurious to our Nature. But many Experiences ſince have convinc'd the World, and recommended them to a general Uſe. The extraordinary Operation of theſe Waters in Mr. *George Long*'s Caſe, of *Shipton-Mallet*, near *Wells*, in the Year 1691, gave a very great Reputation to them: for he drank them and nothing elſe, except a little Wine now and then, for near two Years; by which means, from a perfect Cripple with Stone and Gout, and a quite broken Conſtitution, he recover'd miraculouſly, and might be ſaid to have renewed

renewed his Age. This Cure firſt encourag'd thoſe Waters to be drunk ſo univerſally, as they now are; being a Demonſtration of their great Alterative, Strengthning, and Balſamick Virtues. Whoever has a mind to be ſatisfy'd of this Caſe, may find it at large in Dr. *Pierce* *.

Theſe Waters then are, for the moſt part, drunk hot from the Pump every Morning faſting, or elſe at Lodgings, as hot as they can procure them. They are taken hot for the ſake of the Volatile Spirit that circulates in them; which being ſomewhat of a like nature with the univerſal *Menſtruum* or *Alkaheſt* in our Stomachs, does wonderfully recruit it, when loſt or broken. And really it is ſomewhat ſtrange to ſee its Effect in weak Stomachs and decay'd Appetites, which are ſoon reſtor'd by drinking thoſe Waters warm. I have known ſeveral brought to *Bath*, reduc'd almoſt to the laſt Extremities; whoſe Stomachs were ſo very weak and nice, that they could keep no-

* *Memoirs*, p. 354.

thing

thing in them, but vomited up every thing they took, of either Meat or Drink; and yet ſuch Perſons ſwallow'd theſe Waters, tho warm, with a great deal of Pleaſure: they ſat eaſy on their Stomachs, nouriſh'd and refreſh'd them ſo, that in a few days time, they began to have an Appetite to Fleſh and Fiſh; and recover'd beyond the expectation of their Friends. All other things they took, either Meat or Drink, from the Heterogeneous Particles contained in them, gave an ungrateful Stimulus or Irritation in the inner Coats of the Stomach; ſo that they were forc'd to caſt them up again, ſoon after they were taken. But *Bath*-Waters conſiſting almoſt of Homogeneous Parts, of an Elementary nature, when drunk, were gratefully receiv'd by the Stomach; whoſe Fibres being very agreeably mov'd and affected at that time by them, ſoon communicate their Motion and Pleaſure to all the Fibres of the Body; as Uniſons in Muſick, or Strings of muſical Inſtruments of the ſame Tenſion, immediately move all, one

one only being play'd upon, be there ever ſo many in the ſame Room. This ſo agreeable Motion of the Fibres, and the Pleaſure they bring with them, proves a Cordial to the Perſon that drinks them in an inſtant, as ſoon as they are in the Stomach, before ever they can be ſuppos'd to reach the Blood, and recruit the animal Spirits, ſome Men are ſo fond of; juſt as a Glaſs of Water, in a Moment, revives a Man that was ſpent and faint with Thirſt, before he took it. Now this happens not from the Animal Spirits, but from the agreeable Contraction of all the nervous Fibres of our Bodies; in which conſiſts what we call Life, the total Reſolution of whoſe Fibres is immediate Death. I cou'd here entertain my Reader, by expoſing and ridiculing the odd Notions and whimſical Fancies, that have been conceiv'd, and held by ſome of the moſt eminent Profeſſors in the Art of Phyſick, concerning Animal Spirits, *viz.* Of their Diſtillation, Cohobation, Circulation, and Exploſion in our Body: but this I wave

wave at preſent, as too great a digreſſion, and foreign to my Theme and Deſign. Beſides, *Bath*-Waters are not only a Cordial, as ſoon as they are taken, but by their humid, balſamick Particles, of ſo homogeneous a nature, being retain'd in weak Stomachs ſome time, and convey'd into the Blood, afford a Nouriſhment ſuitable and ſufficient, in ſuch languid and low Conſtitutions; little Digeſtion or Alteration being requir'd to convert them into a true nutritious Juice, fit for the Nouriſhment of all the Parts of our Body.

In diſcourſing then on theſe ſo excellent Waters, for Method ſake, I ſhall confine my ſelf to theſe following Heads.

1*ſt*. The Time when they are to be taken.

2*dly*. What Quantity, or how much Water is required to be taken in a Morning.

3*dly*. The Manner of their Operation in our Bodies.

4*thly* and laſtly, To conſider of the Accidents that happen to ſuch as drink them.

1*ſt.* The firſt thing then to be conſider'd is, the Time when to be taken. The moſt proper Time for drinking theſe Waters is the Morning, between the Hours of Six and Ten; that they may have time to paſs off out of our Stomachs before One, the uſual time of Dining. It happens ſometimes, as I have obſerved, ſome Perſons do not paſs them off by Urine till about Midnight, and with extraordinary Succeſs. The longer they ſtay in us, many times the more good they may do, by mixing more intimately with our Blood, and ſo altering all the Juices in our Bodies for the better. And this, I take it, they perform, by diluting the craſſer and more viſcous Particles in our Blood, and diſſolving of the Saline; ſo that all the Juices in our Bodies are the better prepared for all the Secretions that are neceſſary in the Animal Oeconomy.

Upon this account no one ſhould be troubled that their Waters do not paſs by Urine very quick, provided they find their Stomach not loaded, and

and the Patient is not at all ſick with them; for this argues they are paſſed from the Stomach into the Habit of the Body. But if either of the Complaints mention'd are obſerv'd, then Care muſt be taken to diſcharge and carry them off by Art: There ought to be two Hours, at leaſt, allowed for the drinking of them; for if taken too faſt, they paſs off too quick, or elſe purge by Stool, and then the Benefit of the Waters is often loſt. Very moderate Exerciſe is requir'd all the time of Drinking between each Glaſs, leſt Nature ſhould be diſturb'd; and that thrown off by Sweat, which naturally ſhould have been diſcharg'd by Urine, as *Baccius* has obſerv'd *.

'Tis a Query among Authors, whether hot ſulphurous Waters ought to be drunk in Winter; and carry'd in the Negative: becauſe, they ſay, Convulſions have often happen'd upon drinking them in that Seaſon. 'Tis certain theſe Waters, as to Taſte and

* Therm. lib. 3. cap. 3.

Heat,

Heat, are the ſame Winter and Summer: And infallible Experience tells us, they may be drunk at any time of the Year with ſucceſs, if the Caſe require it. All the Objection I know againſt drinking them in the Winter, is, the Danger of catching Cold upon the Uſe of them in cold Weather; one of the worſt Accidents that can happen to any body in the Courſe of drinking *Bath*-Waters. My Reaſon for it is this: Becauſe by the Catarrh the whole animal Oeconomy is confounded, the Mixture of the Blood diſturbed, the Glands and Lymphaticks are obſtructed, and no natural Secretions regularly perform'd, as they were before the Cold was taken. So that all the Summer Months are moſt proper for the drinking theſe Waters, the Weather being hardly ever too hot for the Uſe of *Bath*-Waters; and the new Notion of the firſt and latter Seaſon is ridiculous: *March*, and part of *April* being many times too cold and windy, as alſo part of *September* and *October*, for Water-Drinkers, that can attend them in Summer; unleſs for ſuch

ſuch as content themſelves to winter there, and drink them all the Year; as is neceſſary in ſome ſtubborn Caſes. See *Fallopius de Aq. Therm. p.* 235.

The whole Courſe of drinking theſe Waters is five or ſix Weeks, but in ſome Caſes more: and if I don't miſtake, Mr. *George Long*, of whom before in this Chapter, told me, He drank little elſe for about two Years; and [illegible]ith the greateſt and ſtrangeſt Succeſs imaginable, by his perſeverance with ſo much Patience. Ordinarily ſix Weeks are enough, and then they ſhould be diſcontinued for a while, to be renewed again, if the Caſe requires a longer time. I have often obſerv'd in ſome that have drunk them too long, they would not only take off their Appetite, but alſo make them ſick at Stomach. This is an Indication, for the moſt part, when it is time to leave them off: And then a few Doſes of bitter Wine in the Morning, and a gentle Purge often carries that off in a few Days, and they reap the Benefit they expected. Theſe Waters cold at any time,

time, with or without Wine, are the common Drink at or between Meals, Malt-Drinks being avoided by many; eſpecially in Cholicks, from its being a fermenting Liquor; or any Diſeaſes or Infirmities of the Bowels, becauſe of its looſening and relaxing Faculty.

'Tis cuſtomary alſo at five or ſix in the Afternoon, among a great many, to drink a Glaſs warm at the Pump, or at their Lodgings, and ſometimes going to Bed, as proper to compleat Digeſtion and promote Reſt; which agrees well with ſome Perſons, tho not with others, as Experience tell us.

2*dly.* The Quantity, or how much of theſe Waters is to be taken, is from one Pint to three Pints in a Morning; ſome may take two Quarts: few Conſtitutions require more; for 'tis poſſible to take too much of a good thing.

This I remember in a Gentleman ſixteen Years ago, who was then my Patient, and would drink five Quarts every Morning; fancying if a little would do good, a great deal would do much more. I foretold him the Conſe-

Conſequences, which fell out accordingly; for in a little time he had ſtretch'd the Tone of his Stomach too far, and palled it to that degree, that he quite loſt his Appetite to all manner of Victuals; which was very good before: but this, by the help of a gentle Vomit, and bitter Stomachick Wines, was ſoon reſtor'd, and he ſufficiently convinc'd of his Error afterwards. To adjuſt, however, the Quantity every one ſhould take, is impoſſible; and many fruitleſs Journies to *Bath* are made on that account, for want of knowing the *Q. S.* the ſufficient Quantity or Doſe for the Conſtitution, or particular Caſe, as it then requir'd.

And there is more nicety in this than every one will at firſt imagine; for tho the *Bath*-Waters are one of the pleaſanteſt, eaſieſt, and beſt Remedies we have in moſt Chronick Diſtempers, yet they too often prove ineffectual, for want of Conduct in the Uſe of them. The Doſe is half a Pint at a time, in moſt Circumſtances; ſometimes the third part of a Quart: they that drink a full

full Pint at once, I am apt to believe, are very little the better for it, and overact their Part, except in ſome very few Caſes; as where the Perſon has been accuſtomed to large Draughts, or is troubled with Gravel or Stone in the Kidneys; which may ſometimes, with Diſcretion, require it.

3*dly.* The manner of their Operation: And here I ſhall not, as ſome do, attribute all the Virtues of theſe Waters to the Spirit that is in them, but to the *totum Compoſitum*, or whole Compoſition. I believe their Heat, which is little more than that of our Blood, with the Salts and other Ingredients, tho ſmall, that are in them, may concur to make them eaſy to the Stomach: And that the watry Vehicle too is of ſome Uſe, in diſſolving and altering the vitiated Juices that are lodged in the pluſhy Coats of the Stomach, and conveying them from thence into the Inteſtines; where by means of their Periſtaltick Motion, ſome of them paſs through the Lacteals into the Blood, and the reſt are thrown off by Stool and Urine.

And

And this, I take it, is the Reaſon, why *Bath*-Waters purge moſt People by Stool at their firſt taking them. Now the Stomach, a principal part in the Animal Oeconomy, being thus cleanſed and ſtrengthned, muſt retain and digeſt whatever it receives the better, and convey its Juices, the more Simple and Homogeneous, to the Blood; and all the Parts of the Body will be recruited with ſuch kind Juices as are proper for their Nouriſhment. Beſides, theſe Waters afford a ſimple Nouriſhment to the Patient at that time, the Fibres of whoſe Stomach are not able to bear any more compounded Food. This watry Vehicle, as I call it, paſſing through the Lacteals into the Blood, by its diluting Quality, renders all the Juices of our Bodies more fluid, promotes their Circulations and due Secretions; and thus ſweetens them, and ſo becomes of univerſal Benefit to the whole Animal Oeconomy. By the help of theſe Waters, Obſtructions in the Viſcera, Spleen and Liver are removed; and the Kidneys, Bladder and Womb, cleans'd

cleans'd and ſtrenghten'd; and all viſcous, phlegmatick Particles or Gravel diluted firſt, and after carry'd off by the proper Paſſages Nature has deſign'd for their diſcharge. This diluting Quality it has, not only attenuates and diſſolves the more tenacious and viſcid Particles in our Blood, but digeſts and exalts them too, by promoting their progreſſive and inteſtine Motion, and ſo rendring them more capable of recruiting the Animal Spirits, whoſe Elaſticity or Spring was almoſt loſt. There is one Advantage more by this watry Vehicle; and that is, that it diſſolves the whole Compages of the Blood and Humours; whereby Nature is enabled to throw off by a natural Diſcharge, through the common Emunctories, what offends her, the more Phlegmatick viſcous Particles by Perſpiration and Stool, and the more Saline by moderate Sweat and Urine. Theſe are the ways, I humbly conceive, Nature takes, when ſhe co-operates with theſe Waters, in reſtoring not only weak Stomachs and decay'd Appetites, but

in removing all other chronical and lingering Diſtempers whatſoever; by ſupplying us with kinder and better nervous Juices, and more active Spirits. Now if theſe Qualities I have mention'd are in the Waters, as I fancy they are too ſenſibly evident to be deny'd; then what more univerſal Remedy can we expect in ſuch Caſes? Moſt certain it is, that which carries off the too Viſcous and Saline Particles that offended in our Blood, ſweetens all the Juices that remain; that is, renders them more fit for Animal Spirits and Nutrition, the chief Deſign of Nature: and then all the Functions and Offices in our Bodies muſt be regular; the whole Animal Oeconomy kept in good Order, and Health, the greateſt Bleſſing upon Earth ſupported and maintain'd. Thus we ſee here, in one View, how Dropſies, in the beginning, before the Tone of the Blood and ſolid Parts is too much weakned; and Conſumptions before too far gone, and the Lungs become too flabby; as alſo all Cachexies, Scurvies, Catarrhs, Scabs, Itch; all Fluxes

Fluxes whatſoever, and their Conſequences, by drinking theſe Waters, may be remov'd, and a vigorous Life prolong'd for a time.

4*thly* and laſtly, The Accidents that happen to ſuch as drink theſe Waters are next to be conſider'd, and taken care of, as there is occaſion; and they are theſe following. 1. Purging too much. 2. Sickneſs at Stomach. 3. Vomiting. 4. Sleepineſs.

1. Purging too much. Theſe Waters then are not of the Purging kind, their genuine Operation being more properly to ſtrengthen the Habit of Body, than evacuate by Stool. And here the moſt experienc'd *Sydenham*'s Rule is to be remembred *, *Etenim hoc eſt firmiter retinendum, quod quoties cujuſcumque morbi Curatio Remediis corroborantibus innititur, Evacuationes qualeſcumque ea fuerint officiunt prorſus:* (i. e.) where ſtrengthning is requir'd, all ſorts of Evacuations are hurtful. However, 'tis not unuſual for them, in the beginning, to purge of them-

* Tractatus de Podagra.

ſelves, in ſome Conſtitutions, without any help of Purgatives at all; and this continues gently ſeveral days together, with advantage to the Patient, which I conceive happens thus: The Waters diſſolve and carry off with them ſome viſcous Juices, and Salts that were in the Stomach and Inteſtines; and this proves a very great Relief to Nature, and renders the Waters much more effectual in the Courſe of them afterwards.

But if purging continues on, and the Patient grows weaker with it, 'tis then to be look'd upon rather from a Colliquation of the Humours, or ſome great Weakneſs in the Inteſtines, than any kind natural Diſcharge; and ſo muſt be taken care of by ſuitable Remedies in ſuch Caſes: For otherwiſe the Waters become injurious to the Patient, who declines viſibly every day under their Uſe; the Stomach and Appetite fails more and more, and the Malady, be it what it will they drink the Water for, increaſes on them daily. Now 'tis very obvious to common Apprehenſions, that theſe Waters not

not paſſing the Lacteal Veſſels, nor entring the Maſs of Blood, cannot be ſuppos'd to be of much uſe to the Animal Oeconomy. In this Circumſtance the Patient ſhou'd drink the Waters ſlowly, and in ſmall Quantities, or in Bed; for drinking them faſt, and in too great Quantities, often occaſion their going off by Stool; and the warm Bed may help too, oftentimes, by promoting Perſpiration. To prevent this, good warm comfortable things are beſt; as bitter Wines, *Gaſcoign*-Pouder, *Goa*-Stone, Steel, Coral, Cinnabar of Antimon. Diaphoret. Antimon. *&c.* and ſometimes a little Rubarb and Diaſcordium going to Bed, with a Cordial Draught to waſh it down. By theſe the Tone of the Stomach may be recover'd, and ſo the Waters, in a little time, perform their Office regularly. This Accident happens oftner to Women than Men, eſpecially to ſuch as are Hyſterical; whoſe Stomachs are generally foul, their Digeſtions bad, and the Fibres of the Membranes of their Stomachs and Inteſtines ſo very weak, that

they contain them but a little while, and they ſlip through them with little Alteration. When this happens to Men, 'tis for the moſt part to ſuch as are very Hypochondriack; which is but a different name for the ſame thing; and Vapours is the common Name to both theſe Complaints. Purging too much with *Bath*-Waters, happens now and then to Cholerick Conſtitutions in Bilious Caſes, from the Acrimony of the Bile irritating the Inteſtines, and ſtimulating the Periſtaltick Motion of the Guts too much at that time. If at any time they purge ſtrong Conſtitutions, and they feel little or no Inconvenience by its continuance; 'tis becauſe the Body was very foul before, or that they were naturally accuſtomed to many Stools. And yet I have known ſome ſtrong, yet groſs Conſtitutions, ſo fond of this Operation of theſe Waters, that they have continu'd them long enough to bring them into fatal Dropſies. This then is ſeriouſly to be conſider'd, whether Nature be reliev'd or oppreſs'd by the Waters; according as

as that appears, to proceed in the Uſe of them, or omit them for a time, in order to prepare the Body to receive and retain them to more Advantage. Take this then for a general Rule; If the Purging continues, and Appetite and Digeſtion fail, the *Bath*-Waters do more Harm than Good.

2. Sickneſs at Stomach. When theſe Waters paſs out of the Stomach very ſlowly, the Acrid and Heterogeneous Juices are there mixed with the Waters, the Stomach is fuller and diſtended, and the Fibrils of its Membranes touch'd in more Parts than when lank and empty; which cauſe theſe unpleaſing Vellications we call Sickneſs at Stomach. This I have obſerved frequently in the Courſe of theſe Waters in the beginning, which ſometimes has continu'd for a Fortnight, not without Pain and a continual Weight. This has chagrin'd ſome Men, and made them angry with the Waters, and almoſt curſe them; who with the help of gentle Purges, ſome good Ecphractick warm Medicines, Patience, and Perſeverance

in drinking on ſome time longer than ordinary, have met with their deſired Effects, and gone away very well ſatisfy'd, and not at all repented their coming to *Bath.* Sometimes drinking the Waters on a foul Stomach, without ſufficient Preparations, may occaſion this Diſorder. A Doſe or two of the Salts are not enough, many times, to carry off the tough viſcous Humours that ſtick ſo cloſe to the inward Coat of the Stomach, that nothing gentle can reach them. Some of theſe depraved Juices, and their vitiated Salts, mixing with the Waters, not yet gone out of the Stomach, cannot but occaſion Fermentations, and ſuch irregular Motions as muſt affect it in ſuch a manner as to make one ſick and uneaſy under it. In ſuch Caſes a Vomit, or a brisk Purge or two in the beginning, is neceſſary, and ought not to be neglected. Diureticks alſo in this Caſe are of uſe, as *Tinct. Chalyb. Tinct. Sal. Tart. Flor. Sal. Armon. Pulv. Diuret. Fuller.* and ſuch like Medicines as theſe; which by attenuating the Humours, and irritating

ritating the Fibres of the Stomach a little, help to promote the Periſtaltick Motion of the Inteſtines, and to convey and carry on the Waters out of the Stomach and Inteſtines into the Blood. I am inclin'd to believe, the not paſſing of theſe Waters, for the moſt part, is chiefly owing to the Defects of the Stomach and Inteſtines, and their Foulneſs, or Weakneſs; and very rarely happens from any affections of the Kidneys. But when 'tis plain the Kidneys are in fault, from Gravel, or any viſcous Matter cauſing Obſtructions there, that muſt be look'd upon as the original Diſeaſe; and ſuch Medicines as are proper in that Caſe, muſt be added to the Waters.

3. Vomiting, which is an higher Degree than the former, and proceeds many times from the ſame Cauſes. This happens now and then, but not ſo often with theſe Waters, as Purging does. Several Perſons come to *Bath* every Year, 'tis well known, with a Prejudice againſt drinking hot Waters, yet find quite contrary Effects;

nothing ſitting eaſier on their Stomachs. Nay, 'tis moſt certain, *Bath*-Waters will ſtay Vomiting; and when the Stomach is too nice, and kecks againſt every thing elſe, theſe Waters will not only remain in them, but alſo refreſh and nouriſh them, as I ſaid before. Tho this falls out but ſeldom, yet now and then we ſee it in cold weak Stomachs, that abound in a cold acid Phlegm: in this, I have obſerv'd the Patient is very ſick, and cannot be eaſy till he has diſcharg'd upwards by Vomit. And this more eſpecially happens at this time, when the Stomach fill'd with Waters, which paſs off but ſlowly, meets with the depraved Juices there; which in this Caſe are more malignant and vitious, than in the laſt Article: ſo that the Irritation caus'd by them in the Fibres of the Stomach being greater, not only makes the Patient very ſick, but alſo forces him to vomit. In this Caſe gentle vomiting, and purging, bitter Wines, ſteel Medicines, bitter Drops, and good Ecphracticks with the Waters, and

and a Glaſs of good *Madera* Wine an Hour at leaſt before Dinner, are no contemptible Remedies.

Now, as I ſaid before of Purging, ſo I ſay of Vomiting here in this place: to ſome Perſons 'tis rather a Relief at firſt, than any ill Effects of the Waters; which muſt be conſider'd in due time. Some I know vomit with theſe Waters, who have naturally ſmall Stomachs; by taking off their Glaſs too faſt. Such as are wiſe enough to know the Cauſe, cannot fail of their Cure.

4. Sleepineſs. And this happens very often to Water-drinkers, as well at *Tunbridge* as at *Bath*. Authors tell us, ſometimes Waters remain in our Bodies, and are felt only by a Weight and Uneaſineſs in our Bowels; which argues, they are not quite gone out of our Stomachs and Inteſtines: At other times they lie in the Habit of our Bodies, and are not felt at all; and ſometimes they remain in our Blood-Veſſels. I am of Opinion, when theſe Waters remain in the Maſs of Blood, and are not carry'd off by the

Emunc-

Emunctories, but fill and diſtend the Blood-Veſſels; that by preſſing on the Cortical part of the Brain, or relaxing the Fibres of the Meninges too much, they hinder the Separation of the nervous Juices or Animal Spirits, thro the hollow Fibres there; and then they cauſe this Drouſineſs and Sleepineſs, which goes not off till the Waters are diſcharg'd from the Blood. There are few that drink theſe Waters, but find this Effect of them ſome time or other. Accidents may occaſion this now and then in all Perſons; and therefore it muſt be from ſome general Cauſe, and I know none more general than what I have aſſigned, and ſubmit to the Judgment of the Learned. In this caſe, Sleepineſs is not to be indulg'd, by lying down on a Bed or Couch; becauſe that Horizontal Poſture carries more Blood up into the Head, which may cauſe Obſtructions, Head-Aches, and other Diſorders there. But a little moderate Exerciſe, and agreeable good Company, that's diverting, ſoon carries that off without any Phyſick at all:

Eſpe-

Eſpecially, if as ſoon as they find it coming on, and they have not drank all, they take them in leſs Quantity that day. In fine, this is a general Rule, That no body ought to ſleep till his Waters are pretty well gone off, that expects any Benefit by them. There is one Complaint more to be added to theſe mention'd; which is, they make ſome that drink them, as they expreſs it, drunk: which they ſometimes fancy to proceed from the ſtrength of the Waters. This, I take it, is nothing but a Vertigo, which happens from a foul weak Stomach, and not from any ſpirituous Particles; ſuch as the ſulphurous Spirits which are in Wine. *Vitruvius* I know tells us, *Sunt Fontes quaſi vino mixti, quemadmodum unum eſt Paphlagoniæ, ex quo etiam ſine vino potantes fiunt temulenti,* lib. 8. c. 3. That there are Fountains which make thoſe drunk that drink them: I am apt to think juſt in the manner, as *Bath*-Waters, and all Waters will; that is, give the Drinker now and then a Giddineſs, which they call Drunkenneſs.

Before

Before I diſmiſs this Article of drinking *Bath*-Waters, I muſt obſerve alſo, that theſe Waters are alſo ſometimes, and in ſome particular Caſes and Conſtitutions, drank cold upon the place. Some young ſanguine Complexions I have known, could not bear their Heat, but were forc'd to keep them till they were cold, to prevent a Fever, they heated them ſo much. In Rheumatiſms, ſome Gouts, a Diabetes, and moſt Caſes of the Lungs, they are better cold than hot; as Experience, our beſt Guide and Miſtreſs, has inform'd us.

I know very well by ſome 'tis affirm'd, theſe Waters are only good hot at the Pump. *Fallopius* tells us, that all ſulphurous Waters, that loſe their Virtues, ſhould be drunk as near the Spring and Head as poſſible. *Baccius* * writes much to the ſame purpoſe. And Dr. *Buynard*, in his Poſtſcript to Dr. *Floyer*, ſays, That the *Bath*-Waters drunk hot at the Pump, were good for weak Stomachs. I might

* De Therm. *p. m.* 69.

here

here entertain my Reader with a Diſpute I had with a celebrated Phyſician upon this Subject, who would not allow, by any means, that theſe Waters were good for any thing cold. But I ſhall, at preſent, paſs over his weak and ſilly Reaſonings on this Subject; becauſe whatever other People may fancy, I am ſatisfy'd he is no Conjurer at Argument; and it looks a little inſulting too, to enter the Liſts with a Man, that has neither the Arms of a Gentleman, nor a Scholar, to defend himſelf. And this I do the rather, becauſe I am very well aſſur'd by one that heard him ſay the next Year, That theſe Waters were too hot for the Lungs; not at all conſidering, that his Conſtitution was very much alter'd from what it was the Year before. But to return to our *Bath*-Waters: I acknowledg it has been always the receiv'd Opinion, theſe and all other Waters are beſt near their Head, and are to be uſed with the ſame Caution that *Galen* preſcribes Aſſes-Milk to ſuch as are Conſumptive, as warm as poſſible; becauſe

becauſe the warmer 'tis, the briſker are its Spirits, and the greater is its Operation and Virtue. *Fallopius*, *Blondel*, *Fowet*, and all the Authors I have met with and conſulted, are of the Poet's Mind;

Dulcius ex ipſo Fonte bibuntur Aquæ.

And not only pleaſanter, but more uſeful too; becauſe of its innate and incoercible Spirit, that Ætherial Fluid which it contains in its Body, that is of ſo Subtile, Volatile, and Elaſtick a nature, that it is ſoon loſt, when cold. And for this reaſon no Art can imitate theſe Medick Fountains Nature has cook'd for us here; whoſe Virtues conſiſt, in a great meaſure, in the mineral Spirit that is lodged in them. So that this is no new Doctrine, but always taken for granted, and ever practis'd, where all other Circumſtances concurr'd. But that theſe Waters are good for nothing twenty Foot from the Pump, is ſuch a fantaſtical Paradox, I am ſure can never be made out by Argument, tho it would

would be of very great Service to Mankind, and ſave a great deal of Expences every Year that are laid out, in ſending theſe Waters to be drank in all Places of *England*, *Scotland*, and *Ireland*. Whoever will take upon him to prove that Aſſertion, muſt prove alſo, and that very clearly too, that all the Virtues of the *Bath*-Waters conſiſt only in their Spirit, and that the other Ingredients are good for nothing; which contradicting ſome thouſands of Experiments, cannot be true. The Diluting and Diuretick Qualities that are in them, when the Spirit is quite gone off, have been of great Uſe in the Caſes afore-mention'd. In one word, I am of opinion, Nature, who has made every thing in Order, Number, and Meaſure, has ſo proportion'd all the Ingredients of this ſo noble a Compoſition, as is altogether inimitable by human Induſtry; and that the Virtues of theſe Waters are not owing to any particular Ingredient, but to them all in Concert together.

This

This Doctrine, I take it, is pernicious too, and may in time be prejudicial to the *Bath*-Waters, ſhould it prevail; becauſe it obliges many to take them at the Pump, that ought to drink them at Home at their Lodgings. The very Fatigue of the Walk is too much for ſome, and many inconveniencies attend it. Quiet, and no Motion at all, makes the Waters agree beſt with others: and ſome I have known have taken them in Bed, becauſe they never found they paſs'd ſo well with them out of it. There are various Conſtitutions that require peculiar Directions, according to the Circumſtances that occur; and no general Rule can be laid down that will comprehend all of them. There is this one common Inconvenience I have obſerv'd often to happen to Water-drinkers at the Pump, in the Morning, in all Weathers; which is, in my Judgment, many times of no ſmall Conſequence in their Courſe; *viz.* that it expoſes them to catch cold, and cauſes ſuch cold Rheums and Catarrhs, as very much diſturb the whole Animal

Animal Oeconomy, and render the Waters of very little Uſe while they laſt. I ſay then, upon theſe Conſiderations, 'tis not abſolutely neceſſary in all Caſes, to go to the Pump, the Miſchiefs that follow it are greater than the Benefit we propoſe by it; and a Glaſs from a Bottle, brought warm from the Pump, carefully ſtopt and kept in a warm Cloth, drank at our Lodgings, differs not ſo much from one drank at the Pump, that we ſhould run ſo many risks, as may happen upon this occaſion. Beſides, it would be ſtrange to believe, the Trade of ſending theſe Waters to *Ireland*, *Scotland*, and all parts of *England*, ſhould continue ſo long, if they were not found by Experience to be uſeful at that diſtance. Upon the whole, I am not afraid to affirm, by frequent Experiences I have had of the *Bath*-Waters, that they may be ſafely drank at ſome diſtance from the Pump, and cold too, with ſucceſs, rather than the Patient ſhould expoſe himſelf to the Inconveniencies mention'd; which are much leſs, ſince the

the erecting a new Pump, and a convenient warm and dry Gallery to walk in: but if nothing contradicts it, they are always beſt at the Pump. And theſe Circumſtances are to be weighed with Judgment and Caution, by the Water-drinkers. For my own part I muſt needs ſay, I ſuſpect the *Bath*-Waters warm in moſt caſes of the Lungs. I have only one thing more upon this Head, and that is, when I ſaid the Waters are better cold than hot in ſome Caſes, I added theſe words, *Upon the Place*; for certain it is, cold *Bath*-Water, of about half an Hour's ſtanding, or little more, is better than it can be any where elſe, of ſome Days or Weeks old, when it has not only loſt its native Spirit, but alſo acquired ſome Degrees of Putrefaction. And thus have I ended my Article concerning the Drinking part, and now am come to Bathing.

CHAP.

CHAP. VI.

Of Bathing.

HAVING ſaid ſo much of Bathing in my firſt Chapter in general, I come now to Particulars. And I muſt obſerve in this place, that there are ſeveral Baths in *Bath*, hereafter to be deſcrib'd, that are of different Degrees of Heat, that render their Uſe the more general: for by theſe means they may better anſwer moſt of the various Circumſtances of the Patients, that have occaſion to apply to them; and 'tis of no ſmall Importance to the Patient, which he uſes. There is one thing more to be obſerv'd, and is of uſe to the Patient, whoſe Cure depends chiefly on Bathing; and that is, that he be prepared by purging and drinking the *Bath*-Waters, and ſometimes Bleeding, before he bathe, for at leaſt a Week or ten Days. It being neceſſary the Blood ſhould

ſhould be cooled and attenuated, as alſo the Stomach and Inteſtines cleans'd, in order to the ſucceſsful Operations of Bathing; whereas ſuch as ruſh into the *Bath*, without theſe Preparations, with crude and foul Stomachs, are liable to Fevers, Head-Aches, Colds, *&c.* and ſo loſe the Benefit of Bathing, for which they came. In diſcourſing upon this Subject, I ſhall, for Method's ſake, confine my ſelf (as I did in my Chapter of Drinking) to theſe Heads.

Firſt, What time we muſt bathe.
Secondly, The manner of its Operation.
Thirdly, The common Accidents that happen to Bathers.

Firſt, The time of Bathing is the Morning faſting, Winter and Summer. In the Morning, becauſe refreſh'd with a Night's Sleep, we are the better able to bear Bathing; and Digeſtions being compleated, we are not ſo ſubject to Accidents that happen from Crudities, cauſing Obſtructions,

tions, Head-Aches, *&c.* And Faſting too, becauſe the natural Heat being ſent out towards the Circumference, Digeſtion would be diſturb'd, were we to go in with a full Stomach, and the whole Animal Oeconomy put out of Order, for want of a Regular Diſſolution of the Contents in the Stomach. This is taken notice of by *Juvenal*, as one of the Debauches among the *Romans*, that they went into their Baths ſoon after they had eaten:

—*Et crudum Pavonem in Balnea portas,*
Hinc ſubita Mortes, &c. ——

Which he and *Perſius* too, in his third Satire, aſſign as the Cauſe of many Diſeaſes, and ſudden Death. Faſting then before, and in the *Bath*, is beſt for ſuch as expect Benefit by Bathing; and a Glaſs or two of the *Bath*-Waters warm in the *Bath*, is, for the moſt part, Refreſhment enough for ſuch as bathe; which not only quenches Thirſt in the *Bath*, but alſo promotes Sweating after. An Hour in the *Bath* is often enough: but that, and the Sweat-

Sweating after, and what *Bath* is beſt, muſt be regulated according to the Patient's Occaſion and Strength. After Bathing, between that and Dinner, one Glaſs of Wine, or a Diſh of Chocolate, may not be amiſs, when Sweating is over, and the Body reſtor'd to its natural Temper and Quiet; for before, it will be apt to cauſe Vapours in the Head, and Crudities and Indigeſtions in the Stomach. People, that have Occaſion, bathe in Winter too, when the Winds are not high; which often proves very troubleſome to Bathers, even in the Summer-time, as well as in Winter: which Inconvenience might be eaſily prevented, as I have ſhewn in the Deſcription of the hot *Bath*.

Secondly, The manner of the Operation of Bathing upon our Bodies, which I take to be theſe two ways.

1*ſt*. Theſe Waters, by their natural and innate Heat, when we bathe, cauſe a better Digeſtion in our Blood, by attenuating its Parts, and promoting its inteſtine Motion and Heat.

To

To this alſo the Sweats after in Bed, contribute not a little; by evacuating from all the Parts of our Bodies, what was neceſſary to be thrown off that way. So that this muſt be of great Uſe in all cold and phlegmatick Conſtitutions, whoſe native Heat is weak: For it warms the Blood, ſtrengthens the Tone of all the Parts, invigorates and mends the Body, when out of order. Hence it is that Palſies are cured by bathing in theſe Waters, tho the Parts are relaxed; becauſe they warm the whole Body, invigorate the Spirits, and mend the Animal Oeconomy: and Nature being thus refreſh'd and ſtrengthen'd, the Blood is more digeſted, and the Tone of the Parts reſtor'd, that were relaxed before. So that theſe Waters, outwardly and inwardly, not only relax, but have their contracting Quality too; which is very well worth our ſerious Conſideration.

2. They ſoften all the Parts that are harden'd and contracted by Cold, and diſcharge all the Heterogeneous Matter, that is impacted in the Pores

of the ſolid Parts. Thus all Contractions of the Tendons, and all ſhrinking of the Nerves, as well as Paralytical Relaxations, tho contrary Diſeaſes, are cured by the *Bath*-Waters: For by ſupporting Nature, they become of univerſal good to the whole Animal Oeconomy. In a word, theſe Baths are to be eſteemed, not only for Pleaſure, but for their Uſefulneſs in the Preſervation of Health. For there are no Forms of Remedies ſo comfortable to any Body, that eaſe Pain and Wearineſs more ſpeedily and more effectually, and may be of Uſe to all Sexes, Ages, and Temperatures, without any Hurt or Inconvenience. I ſhall conclude this Head with that ſaying of *Oribaſius*, lib. 10. cap. 2. *Balneorum ſponte naſcentium multo major & efficacior vis eſt, quam eorum quæ arte parantur*: that is, Natural Baths are much better than any Artificial ones whatſoever.

Thirdly, The common Accidents that attend Bathing, as well as Drinking, I ſhall reduce to theſe few.

1. There

1. There happen ſometimes, by irregular Bathing, Heats over the whole Body, or elſe an Inflammation in ſome particular Part; which are to be removed by Bleeding, Purging, Clyſter, a cooling moiſt low Diet; and ſuch Methods as are uſed in the common Fevers and Inflammations. And here, by the way, I would adviſe all Perſons that are troubled with Gravel in their Kidneys, or Obſtructions in their Lungs, to avoid Bathing, as alſo when the Body is Coſtive.

2. A very great Thirſt, which may for the moſt part be prevented, by drinking ſome Glaſſes of the Waters in the *Bath*, and out of it afterwards; and alſo by forbearing Bathing for a time.

3. Violent Sweats: Theſe are a plain Indication, that Bathing is to be left quite off, or at leaſt, that the moſt temperate Bath is beſt. Perhaps here cold Bathing may be of more Uſe than any Bath whatſoever, of any degree of Heat.

4. A loſt Appetite. If this happens only the Day they bathe, it ſoon goes off again; being only occaſion'd by the little Diſorder and Heat the Body is put into that Day. But if it happens to continue, Bathing is beſt let alone for ſome time.

5. And laſtly, A coſtive Body. Theſe are all occaſion'd by the Heat of the *Bath*-Waters, and for the moſt part, owe their Original to irregular Bathing, (either the Conſtitution is too Sanguine, or elſe the Perſon ſtays in too long) and fall under one Conſideration; and that is, of an Inflammation, or too great Heat of Blood. A gentle Purge with the Salts and Cremor Tart. and a cool Diet, will ſeldom fail to carry off this laſt Complaint. In fine, they have all one common Cauſe, the Indication is plain, and the Cure eaſy.

I cannot diſmiſs this Head of Bathing, without giving ſome Account alſo of Pumping, frequently in Uſe at *Bath*. This is either in the *Bath* upon a particular part, according as there may be occaſion; ſometimes on the Head,

Head, Neck, Shoulders, Arms, or Legs; and ſometimes out of the *Bath* alſo. And this is called dry Pumping, which is uſually done at Night going to Bed, the Part kept warm wrapt up in Flannel. This is of very good Uſe in particular Affections of any Part, where total Immerſion is forbid, in ſome particular Caſes and Conſtitutions, and the Circumſtances of Bathing will not permit; which happens often. Pumping then requires the ſame Preparations Bathing does, and is ſometimes attended with the ſame Accidents, and ſo ſhould have the ſame Method of Cure. This was formerly done by Buckets, and was like what the *Romans* called *Stillicidium*, and the *Italians* meant by *Doccia*. But 'tis certainly much better by the Pump, whoſe continued ſteddy Motion, without intermiſſion, is much the beſt, becauſe it conveys an uninterrupted Warmth to the Part; which is more agreeable to Nature than when done any other way, with Intermiſſions. Both in and out of the Bath, they uſe theſe Pumps as

the Caſe requires, from 200 to 1000 or more ſtrokes at a time, which ſometimes is too much; and then we meet with the Accidents, as before in Bathing. Thus I have finiſh'd my Thoughts concerning Drinking of, and Bathing in the hot *Bath*-Waters.

I ſhall only add a few Cautions concerning Bathing, and ſo conclude this Chapter. Let ſuch as are of a very dry Conſtitution, always avoid Bathing; as alſo all ſuch, whoſe Bodies are very much emaciated, or have any Hectical Heats; ſuch as are ſubject to ſpitting of Blood, have a *St. Anthony*'s Fire, or Inflammation in any part of their Bodies, difficulty of Breathing, or the like. For in all ſuch Caſes Bathing will do more harm than good.

CHAP.

CHAP. VII.

Concerning Diet.

AS to Diet in the Courſe of the *Bath*-Waters, I muſt needs ſay, I have obſerv'd too much liberty taken by a great many, that are at the pains to come to the *Bath* for their Health; who ought, I think, to govern themſelves with more Caution and Prudence on this occaſion, conſidering how ſhort ſtay they make there, what a Proſpect they have of mending their Conſtitution, and how valuable a thing Health is. The want of this Thought, and Management accordingly, has, I am fully perſuaded, oftentimes hinder'd the good Effects of theſe Waters, in many Perſons, whoſe End in coming to *Bath* had been anſwer'd, had they been regular, and liv'd by Rule. I ſhall not enter into a ſtrict Detail of every Particular relating hereunto, it being impoſſible to adjuſt it to all Caſes, what

every one ſhould eat and drink; but ſhall only ſay in general, That at *Bath*, as well as in all other Places, the more ſimple the Food is, the better 'tis for the Patient: compounded Victuals, mix'd Meats, or Varieties, high Sauces, *&c.* make too compounded and vitiated Juices in our Bodies; and by conſequence, complicated Diſeaſes. *Mercurialis* * ſays, In antient times Mankind was contented with little, and liv'd frugally and ſparingly; and then, Diſeaſes, nor their very Names, were ſo much as heard of: high Feeding and dainty Diſhes firſt introduced both. The more ſimple then our Nouriſhment is, moſt certainly the better here, in our Courſe of the Waters; and freſh Meats, and ſuch as are eaſieſt of Digeſtion, agree beſt with the *Bath*-Waters, and render them moſt effectual. As to Malt-Drinks, I am of Opinion, when the Stomach and Inteſtines are weak and ſlippery, they ought wholly to be avoided, and let alone during the

* Lib. de Art. Gymnaſt. *p.* 1.

whole

whole Courſe of the *Bath*-Waters; leſt their Fibres ſhould be more relaxed by them, and the Waters paſs off by Stool, and loſe their proper Operation and Virtues. In this caſe, Wine and cold *Bath*-Water, or Water and a Toaſt put hot into it, is much better, and more agreeable beyond all diſpute.

As to Wine, I take *Madera*, where it may be had true and good, to be the beſt to mix with Water, or to take a Glaſs of now and then alone as a Cordial; becauſe of the Dryneſs it leaves in the Mouth, the Strength of its Spirit, and the little Tartar in it; which argues it a very good Stomachick Wine. Good Sherry, or White *Liſbon*, all dry Wines, as they are called, becauſe they leave a Dryneſs upon the Tongue, and affect the Coat of the Stomach much after the ſame manner, being continuous with it, are preferable next. As for Men us'd to Claret, if there be no Indication to the contrary, Red Wine moderately taken, may be allow'd. Others, who are accuſtomed to the Uſe of Malt-

Drinks, and labour not under the Infirmities aforemention'd, may uſe them here; eſpecially at Meals, as they did before they entred the Courſe of Bathing and Drinking, provided they uſe them with Diſcretion, and don't abuſe the liberty may be allowed them.

There is one thing more not to be omitted here; and that is, that theſe, as all other Waters, are apt to create great Appetites, and make us very Hungry: yet we ſhould not indulge our ſelves too much, nor over-charge the Stomach at any time; and ſlight Suppers, and early, are much better than going to Bed upon a full Stomach, for ſuch as deſire any Benefit by the *Bath*-Waters. For whoever drinks the Waters in the Morning, upon a full and indigeſted Supper, muſt not blame the *Bath*-Waters, if they do not their Office that Day, as at other times. Upon the whole, what we eat ſhou'd not only be of eaſy Digeſtion, but our Diet ſhou'd conſiſt of ſuch Meats as afford not too much Nouriſhment or Moiſture. Hence it is that roaſted Fleſh is better than boiled,

and

and what is well roaſted, better than what is under-done. And by the ſame Rule, all Summer-Fruits ſhould be us'd with Caution, and Garden-Stuff with Diſcretion; leſt we nouriſh the Diſeaſe, inſtead of curing it.

CHAP. VIII.

Of the Virtues of Bath-*Waters in particular.*

IN my foregoing Chapters, I have given ſome ſhort Hints of the Uſe and Virtues of *Bath*-Waters, externally us'd, or internally taken: I ſhall in this entertain the Reader with ſome certain Caſes, which moſt frequently occur at *Bath*. Theſe Waters then are, both ways apply'd, of a ſtrengthning, cleanſing, attenuating, opening, looſening nature. They move Urine ſometimes, cauſe Stools gently, and alſo Sweat, by which they cool the Blood. They comfort the Nerves, warm the Body, and are good in all cold Conſtitutions; and by the emol-

lient

lient Qualities in them, ſoften and moiſten our dry and rigid Fibres, and are good in all the Caſes following.

1. In ſcorbutick Rheumatiſms, and old wandring Pains in any parts of the Body, by bathing and drinking both, when the Pains are not attended with any feveriſh Heats. By drinking theſe Waters with due Preparations by proper Evacuations, the Stomach is in the firſt place cleans'd, the Blood diluted and attenuated, and the ſcorbutick Salts diſcharg'd from the Blood by Urine: By bathing the Pores are opened, and the Salts that lodg'd in the Interſtices of the Muſcular Fibres and Membranes, are thrown off by Sweat. The Catarrhal Rheumatiſm, which is attended with a Fever, where the Blood is very ſizy, admits of drinking the Waters only, and that not till the Violence of the Fit is over, and the Fever gone, to carry off the Relicks of the Diſeaſe, ſweeten and attenuate the Blood. And here, if I am not miſtaken, it may be admitted as a general Rule, That where the Blood is ſizy, Bathing muſt

muſt be uſed with Caution. By drinking then of theſe Waters only, I have often known the remaining Pains of this ſort of Rheumatiſm very ſucceſsfully carry'd off, and the Weakneſs in the Joints alſo, without any help by Bathing at all. The Reaſon that forbids Bathing in this Caſe, I take it, is, becauſe all the Sizineſs and Viſcoſity of the Blood, is not quite gone; which renders it apt to inflame again upon ſo great a Heat, as that of Bathing.

2. In Palſies, as well from Repletion as Inanition. I remember about thirty Years ago, when I was at *Bath*, before the Faſhion of drinking theſe Waters obtain'd ſo much, Palſies, Convulſions, Contractions, Rheumatiſms, Lameneſs of all kinds, Women's and Children's Caſes, were the common Complaints there to be met with; and for the moſt part the unhappy Occaſion of the Reſort there every Year, was for Bathing chiefly. Bathing then was us'd, and that very ſucceſsfully too in Palſies, as Dr. *Pierce* in his Memoirs has, from his own know-

knowledg of the Fact, inform'd the World. But of late I find, ſince the Uſe of the cold Bath hath, from ſome Succeſſes it has met with, been encourag'd by ſome, Bathing here in this Diſtemper is laid aſide, by ſuch as will not eaſily allow, that hot Baths have their contracting, ſtrengthning Faculty, as well as the Cold. *Vid. Willis*, * who relates a Caſe of a *Paralytick* Merchant cur'd by Temperate Baths. 'Tis true, 'tis a very ſtubborn Caſe, and many times requires more than one Summer or two to compleat the Cure. And certainly I think 'tis worth while to compound, tho at a dearer rate, for the Reſurrection of a mortify'd Limb or two: Not that I deny the Uſe of cold Bathing; but what I ſaid in my former Eſſay on *Bath*-Waters, I muſt now repeat, That Drinking and Bathing here with proper Remedies too, are the beſt Preparative in the World for the cold Bath, in this Diſtemper, and many others. All the Caution to be

* Cap. d: Paralyſ.

uſed

uſed in Bathing, in this Diſtemper, is nicely to obſerve, whether the Patient can bear Bathing or not; and not to perſiſt in it, if it appears, upon Trial or Experience, to be injurious to the Conſtitution: for it will not agree with all Temperaments whatſoever. Nor are all the Baths alike in this Caſe; the hotter often the better.

Some Years ago, at the *Bath*, a Doctor of Phyſick told me, that he knew one in a Palſy try'd the cold Bath a long time to no purpoſe; but coming to *Bath*, drinking and bathing there for ſome time, and uſing the cold Bath afterwards, it had its Effects. The Blood being ſweetned and invigorated, the Skin cleans'd, and the Pores open'd, no wonder after all theſe Operations and Diſcharges, the cold Bath ſucceeded better than at firſt.

There is a ſort of Palſy occaſion'd by a bilious Cholick; of which, under that Head, I ſhall ſay more.

3. In the Cholick, I mean the Bilious Cholick, from the Spaſms and Convulſions of the Coats of the Stomach

mach and Inteſtines. In this Caſe the Periſtaltick, or Progreſſive Motion of theſe Parts, which ſerve for the Protruſion of their Contents, is perverted by the irregular Contraction of their Fibres; which at this time cauſes thoſe exquiſite Pains this Diſtemper is attended with, as alſo thoſe violent Vomitings, Coſtiveneſs, and the like. Now all theſe ſevere Symptoms, to ſay nothing at this time of the Iliack Paſſion, which is the Exceſs of this Diſtemper only; I am inclin'd to believe, are occaſion'd by the Viſcidity and Bluntneſs of the Bile, or ſome Obſtructions about the Gall Bladder, or common Duct. In this Caſe I have frequently known bathing and drinking very ſucceſsful to ſuch as have been ſubject to Cholick Fits; not us'd in the Fit, but in the Intervals, in order to carry off the Cauſe, and as a Preſervative from any Returns.

Theſe Waters then, by cleanſing and warming the Bowels, diluting and exalting the Blood and Bile, promote the Periſtaltick Motion of the

Guts

Guts regularly ; the Chyle is duly ſeparated and ſecreted through the Lacteals, and the Excrements convey'd by Siege as they ought to be, and all the Symptoms and Complaints ceaſe, and are at an end. In order to make the Waters more effectual, we uſe gentle Purging now and then, and ſome bitter and nervous Medicines, as neceſſary in this Caſe.

In this Cholick, which *Citeſius* calls *Colica Pictonum*, or *Bilioſa*, deſcribing very particularly all its direful Symptoms that attend it, and often happen in the *Weſt-Indies*, and ſometimes here in *England* too, at the end of this Diſtemper, when the Symptoms are all gone off, and the Patient thinks himſelf reliev'd; then of a ſudden the Matter being tranſlated to the Head, they become Apoplectick, Epileptick, Convuls'd, and Blind; which if they ſurvive, the Matter being thrown o[illegible] on their Hands and Feet, they remain Cripples for many Months, not able to help themſelves, ſtand, nor walk. In theſe uncomfortable Circumſtances I have known Bathing of great

great Service, by reſtoring them to the Uſe of their Limbs: which I think may ſerve to make good my Argument, in the Article concerning Palſies; That hot Bathing is indued with a Corroborating, as well as Relaxing Virtue, and that its Uſe in that Diſtemper ought not wholly to be laid aſide.

4. Conſumptions, if taken in time, and in the beginning, before gone too far, the Lungs not too much weaken'd and relax'd, or flabby, nor the Tone of the Stomach ſpoil'd; and then theſe Waters not drunk hot at the Pump, but ſuffer'd to ſtand a little till rather colder than hotter than our Blood; which in this Caſe can bear no Impreſſions of Heat, but to its diſadvantage. By the help of theſe Waters, a very few Pectorals, Teſtaceous Pouders, and Opiates, the Hectical Heats and Night Sweats are effectually remov'd in a little time. They are, without doubt, much ſafer than our common Pectorals, which in my Opinion ought to be uſed with great Caution and Judgment; for the moſt

moſt part, as they weaken the Tone of the Lungs and Stomach too, cauſe Looſeneſſes, want of Appetite; and for the moſt part promote, rather than prevent the Influx of Humours on the Lungs, occaſion'd by the Catarrh. A confirm'd Phthiſis or Conſumption, is beyond the Power of our *Bath*-Waters, either hot or cold, and requires only a palliating Method to make the Patient eaſy; which is better perform'd by abſtinence from Fleſh, Milk and Water, Conſerve or Sugar of Roſes, and Diacodium, than by all the pompous Medicines in our Shops.

5. In an Aſthma or Shortneſs of Breath. This happens in Plethorick Conſtitutions and a viſcid Blood, which paſſes not freely through the ſmall Capillary Blood-Veſſels in the Lungs, or from a Catarrhal Defluxion upon them. By both theſe the *Bronchiæ* or Windpipe is ſtraitned, ſo as not to admit Air enough for the Blood. Now *Bath*-Water, the natural Balſamick and Diſſolvent, ſoon divides the viſcid Blood, after breathing a Vein, as

as there may be occaſion; and enables it to paſs the ſmall Capillary Blood-Veſſels, and make room for Air, ſo neceſſary an Ingredient of Life. In a Catarrhal Aſthma, where the Habit of the Body ſeems full, the Blood hot and ſizy, care muſt be taken that the Patient drink them not too hot, and that his Lodgings are as airy as poſſible; in order to make them more effectual in this Caſe, and to prevent the Miſchiefs that may attend them, as I have obſerv'd. Spaſms or Convulſions in any of the Organs of Reſpiration, may be the Cauſe of this Malady too, from a vitiated nervous Juice, in which theſe Waters are proper, as great Sweetners of the Blood and nervous Juice.

6. In Dropſies from a Weakneſs and Indigeſtion in the Stomach, ſo that the Chyle and Nouriſhment, when brought into the Blood, is crude and unfit to be aſſimilated with it, and made Blood, and ſo is thrown off upon the Muſcular and Membraneous Parts in the Habit of the Body, which we call an *Anaſarca*, or elſe is diſcharg'd

diſcharg'd into the Cavities of the Breaſt, or Abdomen, and then we call it an *Aſcites*. In both theſe Caſes, by *Bath*-Waters drank, Purging now and then, with good Stomachicks, Antiſcorbuticks, Diureticks, and Bathing between whiles, very great Cures have been performed to admiration. By them the Blood is cool'd, and its Tone, ſo much weaken'd, reſtor'd. By their Diuretick Quality the Kidneys perform their Office, in plentifully ſeparating of Urine; and the Stomach recovers its Digeſtion, and the Chyle is aſſimilated into the Blood. What I ſay here of Dropſies, is true of Cachexies, or ill Habits of Body, from a viſcous cold Phlegm: being much from the ſame Cauſe, and often the occaſion of Dropſies, the ſame method may ſerve both with very little difference.

7. In the Jaundice. This Diſeaſe, I take it, proceeds rather from a too viſcid, depreſs'd, and almoſt vapid Blood, than from any Defect of the Liver; the Obſtructions in thoſe Parts at this time, are rather the Effects, than

than the Cauſe of this Diſtemper. But let the Cauſe be what it will, the Bile is certainly, in this Caſe, very thick and dull, not fit for the Uſes Nature deſigned it. In this caſe the Patient grows very coſtive, becauſe the Bile, depriv'd of its Salts, cannot irritate the Inteſtines to protrude their *Faeces*, and cauſe Stools: the Urine alſo is very high colour'd, becauſe ſaturated with the Bile, which us'd to be ſeparated from the Blood by the Liver, and the Skin all over dy'd yellow, from the vitiated Craſis of the Blood at that time. Hence want of Appetite, frequent Faintings, Heats, and Cholicks. In ſuch Circumſtances nothing is more proper than *Bath*-Waters; whoſe cleanſing, opening, diſſolving, diuretick, and ſtrengthning Qualities, are admirably well ſuted and adapted to the Cure of all the Symptoms mention'd; purging now and then the Body very gently.

8. In the Scurvy. This word has a very large Acceptation, and is often taken for any ill Habit of Body, or Chronick

Chronick Diſtemper. But I ſhall confine my ſelf at preſent to the too ſaline State of the Blood, whether Acid, Acrious, or Corroſive. In this caſe the Patient has frequent Pains all over; the ſaline Particles of the Blood being thrown off upon the Nervous Parts, prick and vellicate them, and cauſe theſe Pains, Spots, and Eruptions in the Skin. The Gums being a tender Fleſh, are eaten away, ſo as to leave the Teeth almoſt bare and looſe. The Urine is very high colour'd, becauſe impregnated with too much Salts that are diſcharg'd there from the Blood, which abounds with it at that time. There are a great many more Complaints, too many to be named at this time; but theſe are the chief. Now the *Bath*-Waters drank for a conſiderable time, by waſhing off the Salts from the Stomach, Liver, and Inteſtines, the *Fomes* or primary Cauſe of this Diſeaſe, together with a regular Diet, moderate Exerciſe, and proper Medicines, cauſe very great alterations in ſuch Conſtitutions, by ſweetning the Blood,

and

and all the Juices in our Bodies, and rendring them fit for Nouriſhment.

9. Loſs of Appetite. Let the Cauſe be what it will, whether from a weak or impoveriſh'd Blood, from an acute or long Chronick Diſeaſe, ſo that the natural Diſſolvent or *Menſtruum* in the Stomach is deprav'd, or by any viſcous, ſour, or ſharp Juices, it be ſo vitiated as not to affect the inner Coat of the Stomach, with that pleaſing Pain call'd Hunger, its eſurine Quality being loſt: In this Caſe nothing in nature is more proper, which by its diſſolving, cleanſing, abſterſive Virtues, and partly by the eſurine Salt which it has in it, reſtores Nature in this Caſe almoſt miraculouſly, when all other things fail. This may happen alſo from a Relaxation of the Coats of the Stomach, in which theſe Waters are of uſe too, by invigorating the Blood, and rendring the Animal Spirits more active, and reſtoring it to its proper Tone again. Thus *Bath*-Waters having theſe good Qualities in them relating to the Stomach, ſtop Vomitings, cure all Heart-burnings;

burnings; whether from an Acid or a Bilious Cauſe, Indigeſtion, Pain in the Stomach, or any other Chronick Indiſpoſition of that part.

10. All ſorts of cutaneous Diſeaſes, as Itch, Scab, and Leproſy, by waſhing off thoſe malignant Salts, that occaſion this Malady, taken inwardly, and diſcharging them by Sweat in Bathing; the ſulphurous Particles too, in the Water entring into the Skin, and altering thoſe Salts by their Balſamick Virtues. And I am of Opinion, if any fail of Relief in any of theſe Caſes by theſe Waters, 'tis becauſe they allow not time enough for their Cure, or elſe are too lazy, and loth to take pains, or cannot keep to a regular Diet; and theſe are abſolutely neceſſary in ſuch ſtubborn Caſes. And what I here obſerve, concerning the Leproſy, *&c.* I muſt apply to the King's-Evil, which requires as long uſe of the *Bath* Waters, as any of the Caſes laſt mention'd do; without which, and a regular Diet, 'tis in vain to

expect much Relief in that chronick and ſtubborn Caſe.

11. In Gravel and Stone in the Kidneys. This proceeds from the groſſer Parts of the Blood, obſtructed in the narrow Pipes in the Reins, through which the Urine is ſeparated; which in time becomes either Gravel or Stone: So that theſe Waters, by their thinner and humid Particles, are proper to dilute the Blood, coagulated in the Kidneys, as Diuretick, to open the obſtructed Tubes, where this Matter is depoſited; and by its ſulphurous and balſamick Parts, to ſoften the Fibres of theſe Tubes, and render them more ſlippery, and to diſpoſe them to diſcharge the Gravel or Stone through the Ureters into the Bladder, in order to be carry'd off by Urine.

12. In Vapours. Tho generally apply'd to Women, yet 'tis a Diſtemper incident to both Sexes, from a Weakneſs in the whole nervous Syſtem, and a Diſorder in the Animal Spirits. Now tho I cannot ſay, I have

have ſeen any [illegible] this Diſtemper perfectly cur'd, yet I have known a great many of both Sexes, with ſome few nervous Medicines, much reliev'd, and mightily mended in their Conſtitutions every Year, by the Uſe of theſe Waters. To theſe I might add many other Diſeaſes, not ſpoken to particularly before, tho included under ſome of the Heads mention'd, and curable by the *Bath*-Waters: As Coldneſs, and Pain in the Head, Epilepſies, moſt Diſeaſes of the Eyes; *Bath*-Water warm from the Pump, being one of the beſt Waſhes in the World for the Eyes and Eye-lids: Deafneſs and Noiſe in the Ears, running of the Ears, Palpitation of the Heart, Sharpneſs of Urine, Wounds and Ulcers Externally and Internally, Piles, Numbneſs in any Part, bloody Urine and Strangury. It would be too tedious at preſent, to enumerate all the Diſeaſes curable by *Bath*-Waters, Internally taken or Externally us'd. I am very well ſatisfy'd I might have brought in any Chronical Diſ-

temper that's [illegible]e. I have ſingled out theſe few only, as the moſt remarkable, and moſt frequent to be met with at *Bath*. Now if the *Bath* Waters are ſo very proper a Medicine, in ſuch capital Caſes I have mention'd, where Nature is ſo very much oppreſs'd; how rational is it to conceive, in Caſes where ſhe is leſs griev'd, that they muſt ſucceed better? I have known a great many come to *Bath*, tir'd with Shop-Medicines, to no manner of purpoſe at all, that have drank theſe Waters with abundance of Delight and Pleaſure; and by the help of a little Phyſick, have ſucceeded to Admiration. They are not only the pleaſanteſt Vehicle for ſuch Medicines as are proper in any chronical or lingring Diſtemper, but more uſeful in any of the Caſes mention'd, than any of the moſt artificial Diet-Drinks out ofthe Apothecary's Shop; no Compoſition known being ſo univerſally good in ſo many Conſtiutions. I am not ignorant the Patient's Diſguſt of Phyſick-Doſes, is

is little minded in the Cure of Diſeaſes by many; tho I can't help being of Opinion, more Cures would be done by Profeſſors of the *Medick* Art than are, were there as much regard had to the Palatableneſs of the Medicine, as to its imaginary Virtues, where it may be done.

13. The ill Habits of Body that ſucceed long, lingring, and malignant Agues, *&c.* and the Reliques of the Jeſuit's Bark; ſuch as Dropſies, Jaundice, *&c.*

CHAP. IX.

Of the Diſeaſes of Women.

DIſeaſes of the Body and Diſorders of the Mind, are the natural Calamities that attend Mankind, no Body is ever quite free from them; and he is only the happieſt, that meets with the leaſt ſhare of them in this World. The good things of this Life we too often loſe

the Benefit of, becauſe we know not how to make a right Uſe of them; and, like Children, are fond of ſuch things many times, as would hurt us, if we had them. Thus being little elſe but the Diſport of Nature, we come into this World for our Eaſe, and are ſeldom eaſy till we are out of it, through our whole Voyage to the other World. This made old *Democritus* laugh, and *Heraclitus* cry, when they ſaw and obſerv'd, not only the Miſeries, but the Follies of Mankind, ſo eager in the purſuit of Trifles. Now if this be the general View of Nature, it muſt be allow'd, the Fair Sex are much more liable to natural Infirmities, and Diſeaſes, than Men are. They are of a much finer Compoſition and tender Conſtitution than Men; whoſe Nerves are more tenſe, and their original Frame and Make much more robuſt and ſtrong. Beſides, they are not only liable to all the Diſeaſes Men are, as they have both one common Nature; but by reaſon of thoſe Parts Nature has deſign'd for the Organs of

of Conception and Generation, they are ſubject to infinite more. As ſuch, tho the moſt perfect of the Creation in all other reſpects, they can't be ſaid to be ſo happy as Men; and ought to be look'd on, not only as the Subject of our Pity, but alſo of our utmoſt Care to make them eaſy.

Now in all Diſeaſes where the Womb is affected, theſe Waters are of very great Benefit; and internally or externally us'd, are very often of prodigious Advantage to the Fair Sex, and are preferable to any Courſe of Phyſick, Art can contrive; if aſſiſted a little, as there may be occaſion. I ſhall begin in the firſt place with the Maiden Diſeaſe.

1. The Green-Sickneſs. This happens to Women about the Age of Fourteen, from an acid, viſcid, phlegmatick, and effete Blood, having few or no active Spirits in it, for want of its due Fermentation. Hence come Obſtructions in the Womb, and a Stoppage of the Courſes. Sometimes the Capillary Blood-Veſ-

ſels in the Womb, whoſe Fibres being too much criſpated or contracted, are the Cauſe, tho not ſo often as the former; and then the Blood thus confined, finds its way through the Noſe, for the moſt part, Mouth, or ſome other parts of the Body. And this may happen too, when the Courſes are ſtopp'd after Conception, and is a very good ſign and omen of it. So that the Blood, from its depraved Craſis, is more frequently the Cauſe of theſe Obſtructions, than from any Defect of the Blood-Veſſels of the Womb. This Caſe then is plainly Chachectick, and will ſeldom fail of a Cure from theſe Waters, with gentle Purges and Aperients. For they by their diluting, attenuating, ſtrengthning, and invigorating Nature, will divide the viſcid Particles in the Blood, attenuate the whole Maſs, volatilize and rouze the inteſtine Motion of its Parts, the better to enable the Blood to circulate through all the ſmaller Veſſels; open Obſtructions of the

the Womb, and promote its regular Evacuations and Diſcharges.

Under this Head I ſhall mention a Species of this Diſtemper, which happens now and then to young Girls, between nine and fourteen: In which the Patient has a deſire to eat Chalk, Oatmeal, Lime, Earth, and ſuch like Abſurdities, from a vitiated acid Ferment in the Stomach; which depraves the Fancy, and makes them long after ſuch Traſh. This may be called *Pica Virginum*, being much the ſame with that, which ſometimes afflicts Women with Child; in which caſe the Waters of *Bath* may, both inwardly and outwardly, be of uſe.

2. Uterine Fluors, white and red. The firſt is occaſion'd by a Weakneſs in the Glands of the Womb, from whence iſſues a white phlegmatick Matter; which is very troubleſome to the Patients, and weakens them very much, if it continues long upon them. The Matter ſometimes changes its colour to green, yellow, and dirty; from a mixture of Salts

with it, which are often ſharp enough to corrode the Parts, and ulcerate them.

The ſecond, *viz.* the Reds, which happen to Women for the moſt part, that have had many Labours, or frequent Miſcarriages; by which means the Capillary Blood-Veſſels of the Womb are ſo weakned, they cannot contain the Blood its full time. This is a ſevere Affliction to Women between the Age of 40 and 50; for I mean only that in this place, and not what relates to younger Perſons, from the briskneſs of their Blood. Now both the Whites and this ſort of Reds too, require almoſt one and the ſame Cure: and *Bath*-Waters, with a very little help, are almoſt Specificks in theſe two Caſes; and rarely fail, if rightly manag'd, and the Womb not grown too Schirrous.

3. Barrenneſs, the Cauſes of which uſually proceed from a cold and moiſt Womb, which renders it too weak for Conception. I need not enlarge on this Head, it being ſo well known to

to every body, that a great many Women who come to *Bath* for the common Cauſe, have become Fruitful from the Uſe of theſe Waters; to the no ſmall Joy of many Families, that almoſt deſpaired of Children before; by warming, ſtrengthning, cheriſhing, cleanſing the Womb, and diſcharging the moiſt and viſcous Particles, that render'd it incapable to perform its Office of Conception.

Miſcarriages are oftentimes to be accounted for after the ſame manner; being almoſt, I think, from the ſame Cauſe, and ſo require much the ſame Method of Cure.

Upon the whole, nothing is ſo kind a Courſe of Phyſick to the Female Sex in theſe Caſes mention'd, which are peculiar to Women, as I ſaid before, as bathing, and drinking *Bath*-Waters. 'Tis an eaſy Method, and more adapted to their ſoft and tender Natures, than any artful Compoſitions whatſoever; by cheriſhing, warming, and drying their too cold and moiſt Conſtitutions.

To

To theſe give me leave to add, by way of Appendix to this Chapter, Childrens Diſeaſes; as Crookedneſs, Rickets, Weakneſs in their Limbs, Big-Bellies, Contractions. Now Children that are ſo very averſe to Phyſick, which is not ſo proper either for their too tender Natures or Conſtitutions, ſeldom fail of Benefit by the warm Bath; which ſtrengthens and enlivens them every Day, and preſerves them from being Cripples, who could neither ſtand nor go, from a Weakneſs or Relaxation of their Limbs; ſuch Cures being very frequent at the *Bath*. And not only in Weakneſſes, but in Contractions too, the warm Baths have a relaxing, as well as a ſtrengthning Quality in them, as I ſaid before. Whoever deſires farther ſatisfaction concerning the Virtues of the *Bath*-Waters, both by Bathing and Drinking, may conſult Dr. *Pierce*'s Memoirs of *Bath*-Waters, a very uſeful Treatiſe on that Subject; who has taken pains to collect, and ſet down many Caſes and

and Cures, which he had obſerv'd in his time.

CHAP. X.

Some Queſtions ſtated and anſwer'd.

Queſt. 1. *WHether theſe Waters are good in the Pox?*

Anſw. Authors generally agree in this, That the Cauſe of this Diſeaſe is ſome malignant, corroſive, and contagious Ferment, which infects, wherever it is receiv'd, all the Humours of the Body. Whether it had its Original at *Naples*, or (which ſeems moſt probable) was brought home from the *Weſt-Indies* by ſome of *Columbus*'s Soldiers, among the reſt of the Commodities of that Country; or whether new Diſeaſes may happen, from ſome unknown Qualities in the Air, not obſerv'd before; I paſs over, as little to my preſent Queſtion. Moſt Authors that have written of hot Waters, have argu'd

argu'd this Point, who for the moſt part will hardly allow of either Bathing or Drinking them in this Caſe. *J. Bauhinus* * forbids their being drank in this Caſe, becauſe of their Humidity; this Diſeaſe requiring all drying Medicines. But Dr. *Guidot* has, in a few words, anſwer'd all the Scruples upon that account, about the drinking part, when he ſays, they operate not only as Purging, Diuretick, Sudorifick, and ſometimes by Salivation too, but as great Alteratives: and then concludes, and I think very juſtly too, That, as ſuch, they muſt be of Uſe in this Diſtemper.

As to Bathing, no body hardly attempted it. *Baccius* † will not conſent to Bathing in the Pox, becauſe of the Heat of the Waters. *Fallopius* ‖ tells us, he had ſeen ſeveral cur'd by drinking; but then adds theſe words immediately after, *Non*

* Font. Bollens. *p.* 289.
† De Thermis, *lib.* 3. *c.* 5.
‖ De Thermis, *c.* 11.

utatur

utatur tamen, qui Gallico laborat Aquis his Medicatis per inſeſſionem; which forbid bathing altogether in this Caſe. Dr. *Guidot* does very faintly allow it, but ſays nothing to recommend it. Now, with Submiſſion to ſuch grave Authorities, I ſee no juſt reaſon to fear the Uſe of theſe Waters, either externally or internally, in Patients thus affected. For if the Cauſe of this Diſtemper proceed from very corroſive and vitious Humours, why theſe Waters drunk, which are ſo great an Alterative, may not ſoften their ferine Nature, aſſiſted with proper Specifick Medicines in this Caſe, I know not. And then, after due Preparations made, the Blood-Veſſels emptied, the Humours in part evacuated, and Fever prevented; what ſhould contradict Bathing, by diſſolving and diſperſing the Humour, and drying and conſolidating all the Parts of the Body, will be hard for any one, I am apt to believe, to make out in any rational way of Argument.

J. Rho-

J. *Rhodius* * tells us, that he ſaw an inveterate pocky Head-ach, cur'd in fourteen days, *Stillicidiis aquæ Calentis Sulphureæ*, only by dropping hot *Bath*-Waters on the part. And Monſieur *Aubery*, in his Treatiſe of the Baths of *Bourbon*, aſſures us, he ſaw a *Swiſs* cur'd of the Pox, by ſitting three Days together in the hot Bath at *Vichy*. For my part, I know by my own Experience, I have ſeen both drinking and bathing in the *Bath*-Waters, with proper Mercurials, more than once in this Diſtemper, ſucceed to Admiration; and never would deſire a better Vehicle, or Diet-Drink, for the proper Medicines in this Caſe, or eaſier and pleaſanter Aſſiſtance than I have had from theſe Waters, externally and internally taken in this Diſtemper; and ſhall make no ſcruple to ſay with Dr. *Fouet* † upon this Caſe, *Son mal ſera incurable, ſil ne cede a la boiſſon, & aux Bains de ces Eaux.* If

* Cent. 1. Obſervat. 75.

† Bains de Vichy, *p.* 27.

they

they can't be cur'd by drinking and bathing here, they will never be cured any where.

As for a virulent *Gonorrhœa*, which is often the Prologue to the Pox, I ſhall not pretend to give the World any Experiments I have ever made, that may recommend the Uſe of theſe Waters in that Misfortune. *Bath*-Waters, I take it, are of too hot and ſearching a nature to be uſed in a Caſe, which proceeds for the moſt part from an Inflammation; and is never better cured than by cooling Drinks, and the gentleſt eaſieſt Purgers. Whereas the common Method in this Caſe, conſiſts chiefly in purging Pills made of Aloes, Scammony, Coloquintida, Jallop; and ſome ignorant, but bold Adventurers in Phyſick, give Turbith Mineral, and other ſtrong Mercurials to their Patients in this Caſe. Theſe warm Purgers heat the Blood, break its Fibres, inflame and weaken very much the Parts affected, and cauſe ſuch Gleets as are very often incurable. And I believe it will

be

be allow'd me, 'tis no eaſy matter to reſtore to their proper Tone and due Contraction, any Fibres that are relaxed and diſtracted from an Influx of Humours upon them, for ſome Weeks, nay I may ſay Months too, occaſion'd by immoderate and inconſiderate purging in all Conſtitutions. I will not preſume to ſay, Purgers are not at all neceſſary in this Caſe; but I dare boldly affirm, 'tis the leaſt part of its Cure. For beſides the miſchief ſtrong Purging does in the Blood, mention'd before, the Strangury and Cordee, the common Attendants of this Diſtemper, and the moſt troubleſome and vexatious Symptoms to the Patients, are always increaſed by it, and the Running continu'd too long, till it ends in a Chronick Gleet, very hardly, if ever ſtopt. Hence Impotency in both Sexes, many a Family loſt, and many a fruitleſs Journey made to *Bath*, occaſion'd only by this rough Method of treating ſuch as are the unfortunate Adventurers in *Cupid*'s Gardens.

I have met with many of theſe in my time, which were always occaſion'd by frequent warm purging Pills, Bolus's, *&c.* taken by hat-fuls, as the common Expreſſion is, amongſt Patients of this kind. Theſe Gleets I have ſeen cured ſometimes, when the Patient, by a freſh Clap, has broke the old Wound up again, and carried off the Callous or Hardneſs of the Part; which, I am of Opinion, for the moſt part, happens in this Caſe. Now Gleets are very troubleſome to Men, but much more to Women, and often end in Conſumptions; for the Matter that is diſcharg'd every Day, is ſo much of the nutritious Juices of our Bodies: The Parts adjacent being defrauded of their proper Nouriſhment, firſt cauſe Weakneſs in the Loins, then in the Back, and by degrees affect the whole Body with Hectick Heats all over, and an univerſal Conſumption, and waſting of the fleſhy parts of the Body; which proves incurable for the moſt part.

This purging Method is better borne by Men than Women, whoſe Fibres are not ſo tenſe, nor Fleſh ſo firm, nor is their Conſtitution ſo ſtrong as Mens. They can't go through this Courſe ſo roundly neither, but muſt intermit once a Month, and leave off Medicine quite; in which time the Diſtemper gains ground, and requires more Doſes than Men do; and ſo proves the Bane and Deſtruction of more of the Female Sex, than can be at firſt imagined.

Now if theſe things are true, as I am perſuaded they are demonſtrable and ſelf-evident, from the many ſad Experiences of this kind, to be met with too frequently in this Town; I heartily wiſh, for the good of Mankind, ſome eaſier Method were found out, to carry off and diſcharge this virulent and contagious Humour. And this I have ſeen often done by the mildeſt Purgers, when the ſtrongeſt have only inflamed the reckoning, and aggravated all the Symptoms and Complaints.

plaints. Thus with Lenitiv. Elect. Caſſia. Manna. Cremor Tart. Sal. Cath. Amar. Calomel. now and then, and ſuch like gentle Purgers, and cooling Drinks, not only very pleaſant Medicines may be made, that are not at all ungrateful to the Patient; which by gently diverting the Courſe of Humours from the Parts affected, cooling the Blood, and checking the too quick Motion of the Fluids, hindring the Flux of them to the Parts affected, that are ſo weaken'd at that time, the Strangury ſoon abates, the vitious ichorous Matter grows thicker, white, and ropy, and in ſmaller Quantity; and by the help of a proper Injection, quickly cur'd.

With this Method the Patient betrays not himſelf by his Looks, nor expoſes his Reputation; for he may be allow'd a moderate Glaſs of Wine, if us'd to it, may go about his Buſineſs without being ſuſpected; and is always cured ſooner, ſafer, and pleaſanter, than by nauſeous Pills, Bolus's, or Electuaries, or the ſtronger Purgers,

Purgers, without leaving the leaſt Weakneſs or Gleet after it; ſo pernicious eſpecially to the Fair Sex, who are rarely cur'd without Gleets, and Whites to their Lives end. I know very well 'tis the Opinion of ſome Practitioners, that all Injections in a *Gonorrhœa* are dangerous, and the whole Cure is to be committed to purging Medicines only; upon this account, I ſuppoſe, becauſe the common Injections in uſe, are of an aſtringent nature, which may ſooner cauſe a Pox than a Cure: for the venomous pocky Ferment being lock'd up, will, in a little time, be communicated to the Maſs of Blood, and its dire and tragical Effects will ſoon appear; not only in the Noſe, but in all the parts of the Body. But ſuppoſe an Injection may be prepared of ſuch Ingredients as may cool the Parts affected, digeſt the vitious Matter in a very few days, take off the Strangury and Cordee ſooner than can be thought, by any that have not experienc'd it, ſtrengthen the Parts affected, and alſo dry and heal

heal up the Ulcer, without any ill Conſequences whatſoever: Then I do affirm ſuch an Injection, by being apply'd immediately to the Parts affected, may be as ſafely made uſe of as a Plaiſter to a broken Shin, or any ulcerated part of the Body, with only ſome gentle cooling Purgers and Liquors to divert the Fluids from the Parts:

The following Injection I have made uſe of above twenty Years with great Succeſs,

℞ *Vitriol. Alb. q. ſ.*
Solv. in Aq. Fontan. ℔. ii.
Addendo Spirit. Vin. Gall. q. ſ.

This Injection may be us'd after a Purge or two, when the Clap is formed; and it will, in a Day or two, not only take off Cordee, and Strangury, but alſo digeſt the virulent Ichor or Running, and heal the Ulcer in ten or fourteen Days; as by frequent Experience I have known among Soldiers, Seamen, and Citizens, without any Weakneſs, Gleet, or any

any other ill Conſequences whatſoever.

By this Method the moſt virulent Claps I ever ſaw, have been cured in ten Days in a married State, without the leaſt Miſchief; and Chancres and Claps together in a Fortnight, without any After-clap at all. And I am perſuaded, let others think what they will, that the ſooner a Clap is carry'd off, the better 'tis cur'd; and the only Miſchiefs I have ever heard of, were occaſion'd by the immoderate Uſe of warm Purgers; which prolong the Cure, and always leave Weakneſſes, and ſtubborn Gleets behind, ten times worſe than the Claps themſelves.

I cannot ſet down here the exact Quantities of the Ingredients for this Injection, becauſe, *pro re natâ*, they are to be alter'd as the Caſe requires; Uſe only will inform any Man, how to adjuſt the Quantities. I am not ignorant how cautious many are in the Cure of this Diſtemper; and from a fantaſtical Conceit they have taken

taken up, ſtartle at bleeding in it, for fear of I know not what Miſchief it may do the Blood, by throwing the malignant Ferment into it, and cauſing a Pox all at once. For my own part, I muſt own I have ſeen the Succeſs of Bleeding, when the Strangury and Cordee are very troubleſome, which often happens in young ſanguine Conſtitutions; not only without the leaſt Miſchief to the Patient, but I always found theſe vexatious Symptoms ſoon give way upon bleeding and a cool Diet. I ſhall only add one word more; and that is, This ſhort and eaſy Method is liable to leſs Inconveniences than the long purging way; becauſe it will give a Man the more liberty in his way of living, and the Night-Bottle will do him the leſs hurt. In ſhort, I never heard of any evil Effects of this ſpeedy Method of Cure, no Gleet or Pox after it in all my Life; and hope 'tis no Offence to Humanity or Morality, to make Mankind eaſy as ſoon as poſſible, let the occa-

ſion of the Diſtemper be what it will. And I preſume few of the Unfortunate will be diſoblig'd, when they find themſelves cur'd ſooner, ſafer, and pleaſanter, without nauſeous Electuaries, Bolus's, Pills, *&c.* that aggravate all the Symptoms, prolong the Cure, and are generally attended with ſuch ill Conſequences as are very ſtubborn, and often prove incurable. If any object, that the Method I propoſe makes not that Pomp and Figure, that an elaborate Doſe of Pills, Bolus's, Electuaries, and Diet-Drinks do on the File; that it hinders the Conſumption of Drugs, makes the Cure cheap, *&c.* All the Anſwer I ſhall make to ſuch ill-natur'd Triflers, is, according to the common Precept in Phyſick, *Medicamenta non ſunt multiplicanda ſine neceſſitate*; Humanity obliges us not to multiply Medicines, without an abſolute Neceſſity of doing ſo. And 'tis a conſtant Injunction on our Faculty, that all Cures be done, *citò, tutò, & jucundè.*

Firſt,

Firſt, Soon, becauſe Delays are always dangerous in the Cure of Diſeaſes, and Mens Health and Life are too valuable Bleſſings to be trifled with.

Secondly, Safe, becauſe it can be no Cure, if it be not a ſafe one, not at all attended with ill Conſequences, worſe many times than the original Diſtemper; as Gleets and Poxes from an ill-cur'd Clap.

Thirdly, Pleaſantly too, becauſe the pleaſant Guſto of the Medicine makes it eaſier to the Patient, and helps him the better to undergo the Fatigue of his Malady; which I wiſh were more conſider'd and practis'd amongſt Phyſicians in all Caſes.

So much, *en paſſant*, and no more; for I am not writing a Treatiſe on this Malady; nor do I condemn all Authors that have wrote of it, as a late anonymous Author has done, by giving us a much more crude and fooliſh one of his own.

Queſt. 2. *Whether* Bath-*Waters are good in the Gout?*

Anſw. Dr. *Aubery* * commends *Bourbon* hot Waters drank for the Gout, after ſome univerſal Evacuations, and between the Fits: for, he ſays, it does not only diſſolve the remainder of the gouty Matter, but alſo dries and fortifies the Joints; yet at the ſame time adviſes the Uſe of them upon the Place, and that for a conſiderable time together; it being neceſſary, in ſo ſtubborn a Caſe as the Gout is, to perſevere a long time in the Uſe of the Waters. Mr. *Long* was a Demonſtration of this; for he drank and bathed for ſeveral Years together, and found great Benefit by both of them. Moſt certain, it is of great Uſe to ſuch as are well ſtricken in Years, and Cripples, and labour under an old habitual Gout; but they are to be us'd with Caution in young and ſanguine Conſtitutions. It will be eaſily allowed me by all the Profeſſors of Phyſick, that the Gout is a very nice and tickliſh Diſtemper, the Cauſe of it is

* Bains de Bourbon, *p.* 212.

very

very latent, and the Cure muſt be as doubtful, where the Cauſe is not known. Dr. *Sydenham* ſuppoſes the Cauſe to ariſe from Indigeſtion, and a Weakneſs in the Stomach; and yet he is afraid of ſuch Medicines as warm it, for fear it ſhould be too hot for the Blood; ſo adviſes a ſtrict Diet, and Exerciſe in the room of it, unleſs when the Stomach and Inteſtines are affected, and Nature is not able to throw it out upon the extreme Parts: and then in that Caſe he allows of warm Medicines; ſuch as are Cephalick, Stomachick, and Ecphractick. 'Tis upon this Account alſo, that *Liberatis*, * a learned and ingenious *Italian*, in his Treatiſe of the Gout, adviſes drinking hot ſulphurous Waters in this very Caſe.

Every body knows, that knows any thing of Phyſick, that ſome Conſtitutions are very nice, where the Stomach is naturally weak or cold, and the Blood warm, which ſometimes will happen; and then ſuch Perſons

* De Podagra Politica, *p.* 195.

ſucceed not ſo well with Medicines, as others, that labour not under ſuch Misfortunes. Upon this account they may be of Uſe, in this Caſe, to ſtrengthen the Tone of the Stomach, cleanſe it, waſh off the peccant Salts by Urine, and procure a better Digeſtion, without heating the Blood at all; their Heat being ſpent upon the cold Parts of the Stomach, before it can arrive at the Blood. *Sic enim contrariis medebitur intemperantiis abſque partium ex oppoſito laborantium Læſione & Faſtidio*, as the ſame Author has it. For this reaſon I have known many drink theſe Waters with good Succeſs; eſpecially in the habitual Gout. 'Tis certain a moſt ſtubborn Diſtemper, that has baffled all the Profeſſors of Phyſick that have appeared in the World. The Cauſe lies too deep for any Method or Medicine yet known, to come at the bottom of it. *Hippocrates*, in his Tract *De Veteri Medicinâ*, ſays, That we have in our Bodies ſweet and ſour, ſharp, bitter, inſipid, and infinite more Particles, that

that cauſe no diſturbance at all in us, whilſt intimately mix'd and temper'd all together; and are only hurtful when any of them grow too numerous, and are ſeparated from the Maſs. Theſe different Particles in our Blood are, I take it, the Seeds or Seminaries of that vaſt variety of Diſtempers that afflict Mankind. Thus the gouty, or conſtituent Particles of the Gout, may remain in us ſome Years, and circulate with the reſt without any Pain or Diſorder; till they grow too numerous, croud together, and aſſiſted by the nitrous Air and celeſtial Influences, diſturb the natural Mixture of the Blood ſo, that Nature is forc'd to exert her ſelf, and caſt off thoſe looſe and vitiated Particles, into the Interſtices of the Joints, by the Glands, deſigned by Nature for that purpoſe, to prevent Fevers and Diſorders that otherwiſe would fall upon the whole Maſs, as Dr. *Havers* has learnedly and ingeniouſly expreſs'd it in his *Oſteology*, or Treatiſe of the Bones. And the ſame Author tells

us, this peccant Humour thrown off thus, with the mucilaginous Juice that ſerves to moiſten the Joints, and render them the fitter for Motion, is ſometimes Saline and Pungent, ſometimes Acrious and Urent, and moſt frequently an Acid, or, in a manner, corroſive Salt; and that it is diſcharg'd from the Blood by way of a Criſis, which pricking the Membrane there, is the Cauſe of that exquiſite Pain that is almoſt intolerable in thoſe Parts. He ſuppoſes alſo the Paroxiſms of the Gout are longer or ſhorter, as either of theſe may be the Cauſe: and concludes, I think very rationally, where the greater Coagulation or Viſcidity is in the vitiated Mucilage, the greater is the Acid that cauſed it; and always the longer the Fit, and the ſhorter from the Saline or Acrious. Hence it is that Bitters and Ecphracticks, and comfortable warm Medicines are always of uſe in the Habitual or Chronical Gout, and long Fits. Now Acids internally taken muſt increaſe the peccant Humour, irritate the Blood

Blood more and more, cauſe a greater Coagulation in the Joints, weaken the Habit of the Body; and if purſu'd, cripple the Patient before his time, as too many, to my Knowledg, have experienc'd, that have ventur'd on that bold and groundleſs Practice. Hence it is we look on the Gout as a healthy Diſeaſe to ſome, becauſe, as a Sink or Common-ſhoar, it carries away ſuch Particles by a critical Diſcharge, as were burdenſome to Nature; by which the whole Maſs of Blood is purged and ſweeten'd, and other Diſeaſes prevented: Provided the Fits come not too often, and the Conſtitution be not too much fatigu'd and broken by the Diſtemper. 'Tis very obſervable, ſeldom any body has it very ſeverely, that has felt nothing on't till paſt Fifty; and then it is an Argument of Vigour and Strength, and we commonly wiſh ſuch Joy, as it prognoſticates long Life; which for the moſt part proves true. Dr. *Havers*, before-mention'd, ſuppoſes the mucilaginous Juice, as

the Cauſe of the Gout, is prepared by the Spleen, and from thence convey'd to the Blood. And the Antients believ'd this very *Viſcus*, the Spleen, was the Seat of Hypochondriack Melancholy. Now if we ſhould conſider the Nature of theſe two Diſtempers, and how they are often tranſmuted one into the other, both theſe *Hypotheſes* may be true. For I have known ſeveral Inſtances, where the Hypochondriack Fits have, by good Management, gone quite off by the critical Paroxiſms of the Gout, and *vice verſa*, the Gout turn to the Hyppoes. I remember a Gentleman told me once at *Bath*, not long ſince, that fearing he ſhould be as gouty as his Father was, to a very great degree, he got himſelf let Blood very frequently, and plentifully upon his firſt Apprehenſions of it; and ſo ſhifting his Gout, became one of the moſt Hypochondriack Perſons I ever ſaw in all my Life. But I muſt not forget, I am not writing a Treatiſe of the Gout, ſo ſhall refer my Reader to Dr. *Sydenham*'s

denham's Tract of the Gout, if he covets any farther Satisfaction in this Subject.

Queſt. 3. *Whether we ſweat in the Bath under Water?*

Anſw. I was once ask'd by a Doctor of Phyſick in the Croſs-Bath, Whether ever I had made any Tryals, by which we might come to any certainty, what we loſt in Weight in Bathing? I told him, no; becauſe I was of Opinion, there was ſo much Nicety requir'd in ſuch an Experiment, that I could not ſee how it could be try'd any where but in the *Bath* it ſelf by ſome Hydroſtatick Engine, contriv'd to weigh our Bodies there. For out of the Bath I thought it was altogether impoſſible to be ſo exact, as was requiſite to make ſuch an Experiment ſatisfactory. Beſides, I told him I judg'd it hardly worth while to try, becauſe I did not ſee how any part of our Bodies that are under Water, could ſweat with ſo great a Weight. Upon which the Doctor ask'd me, How the *Bath* Guides then

then came to be ſo thirſty in the time of Bathing? To which I anſwer'd, I thought the reaſon of that was very obvious, and proceeded from their being a great while in the Slip, where they are almoſt out of the Water, and very liable to greater Sweats, than when the weight of the Water was upon them. That they were alſo much expos'd while in the *Bath*, by wearing no Waſtcoats that ſtick cloſe to them, nor keeping their Bodies under Water, as the Gentlemen do when they bathe. And here our Philoſophical Conference ended. Give me leave to proſecute this Argument a little farther, which I ſhall endeavour to make probable from Authority and Reaſon. Dr. *Blondel* * in his Deſcription of the Baths of *Aken* in *Germany*, ſays, *In Balneo Corpus circumquaque ambitur ut non datur diſſlationi locus.* And *Ariſtotle* † in his Problems, *Membra aquæ calidæ immerſa*

* Deſcript. Aquar. Aquiſgran.
† Sect. 2. c. 42.

non

non ſudant, etiamſi ex ſe ipſa recaleſcunt. I know the learned *Sanctorius* ſays *, *Lavacra actu calida juvant perſpirationem*; which, I conceive, does not contradict the Notion at all, that our Bodies do not ſweat under Water; there being a very great difference between Sweat and Perſpiration, as Dr. *Cole* has very learnedly made out in his Treatiſe, *De inſenſibili Perſpiratione*, p. 74, 75. Perſpiration then may continue in the *Bath*, and be ſomewhat greater too; becauſe the Parts are very fine, and their force may be increas'd by the Warmth of the circumambient Water, and the greater Velocity of the Blood's Motion at that time. Whereas at the ſame time, the Preſſure of the Water on the Habit of our Body, may, in all probability, be great enough to contract the Cutaneous Glands there, and ſo prevent the ſeparation of any Particles from the Blood by them. *Vid. Bellini de Sang. Miſſion. Propoſ.* 8. By Expe-

* Sect. 2. Aph. 2.

rience

rience we know very well, that Men, not us'd to bathe in hot Water, continue in the King's Bath, the hotteſt of all, two or three Hours together, with little Thirſt all the time of their bathing there, and ſweat very plentifully afterwards in their Bed.

Now our Reaſon tells us, 'tis hard to believe any body could bear ſo great an Evacuation, as Sweating is, ſo long together. And this Argument will have more ſtrength and force if we do but conſider, how in the Bagnio, when nothing hinders, and our Bodies are free, where we ſweat very plentifully, we grow very thirſty, and ſoon faint, by reaſon of the Expence we are at from ſweating. So that in about half an Hour, we are forced to quit the hot Room for a cold one, in order, by degrees, to come to our Temper, and cool again. I am of Opinion farther, which I humbly ſubmit to the Learned, that 'tis impoſſible to come to any certain and poſitive deciſion of this matter, unleſs

leſs we can be ſure, that no parts of the *Bath*-Waters, while we bathe, inſinuate themſelves through our Skin and Veſſels, into our Blood. And till we know how to account for this, I cannot ſee how we can conclude any thing about our Sweating and Perſpiration in the *Bath*-Water.

Bellin. Sang. Miſſ. p. 151. thinks it very plain, that in Bathing the Waters do not only penetrate the Skin, but that they enter deeper, into the very Blood. So that the ſolid Parts are not only ſoftned, but the Blood is alſo diluted, cool'd, and attenuated, and its Circulation and Perſpiration thereby promoted. The divine *Hippocrates* affirms, That our Bodies are inſpirable as well as expirable; when he ſays, Ἔκπνοον καὶ ἰσόπνοον ὅλον τὸ σῶμα. And *Galen*, in his Comment upon theſe words of the old Gentleman, ſays, 'Tis probable he meant, that the Arteries in the Habit of our Bodies receiv'd in Air, which by them was convey'd to all parts of our Bodies. *Cæſar Zazotta*,

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a Man of admirable fine Learning, in his *Medica Martialis*, has this Expreſſion, *Alterat vero Balneum quatenus refrigerans eſt, intemperiem emendando, ſitim tollendo per Corporis meatus intro aſſumpta Aqua* *. Theſe Authorities and Experiences put together, make my Argument more plauſible: and for this Reaſon I have ventur'd to ſay, in my Deſcription of the ſeveral Baths in *Bath*, that the Croſs-Bath is preferable to the Queen's-Bath, tho near of one heat; becauſe the Croſs-Bath hath Springs of its own, and its proper native Spirit is of more Uſe to us in bathing, if it penetrates into our Blood, as was prov'd before it does, than that which has no Springs of its own, but is deriv'd from another, and brings with it all the Filth, occaſion'd by ſuch as bathe there.

If this Doctrine be not allow'd, that Waters may penetrate thus, I would fain know, what good may be expected from emollient Fomen-

* *Vid.* Sanctor. Sect. 1. Aph. 103.

tation,

tation, Ointments, bitter Cataplaſms to kill the Worms, Artificial Broths of ſeveral kinds, Relaxers, Comforters, and Strengthners, Epithemata, Moiſtners, or Anodines, or things apply'd to any part, *viz.* to the Region of the Kidneys, Liver, Spleen, Navel, *&c.* Or what will it ſignify, whether the Baths are made of Oil, Milk, or Waters, if nothing but the Heat is to be conſider'd? And how comes a Bath of Wine to exhilarate and refreſh our Spirits, more than common Water, or any thing elſe does?

Abiſhai, I am perſuaded, kept *David* alive, not only by the bare natural Warmth of her Body, but alſo by the Moiſture and Nouriſhment he receiv'd at the Pores of his Body from hers; which cheriſh'd and refreſh'd him. And this I take was the Caſe of a worthy Patriot of our own Country, who I am very well aſſur'd, above thirty Years ago, was reduc'd to ſo low a Condition, and ſo very weak, that he abhor'd even Kitchin-Phyſick; and yet was reſtor'd

ſtor'd by a Couple of buxom Girls out of the Country, laid warm to his Sides in Bed. He was alive not long ſince, and hearty for his Age, being about 90 years old when he died. *Magni refert quibuſcum dormieris.* Thus Garlick, apply'd to the Soles of the Feet, will ſoon be taſted in the Mouth.

All which I think ſufficient to prove, that our Bodies may be as well inſpirable as expirable; that is, there is a Magnetiſm in our Bodies: and if ſo, 'tis probable we may receive ſuch Quantities of the *Bath*-Waters into our Bodies, by the Pores, when we bathe, as may be greater than what we loſe by Perſpiration, and the Sweat of thoſe Parts which are above Water; or at leaſt, it may be enough to puzzle any over-nice Inquirer into the matter. This puts me in mind of a Story I had from a Jockey, who had rid many a Race; that he was kept waking and faſting ſome time before he rid, in order to waſte his Body, and bring him down to ſo many

many Stone only as was agreed on. After the Race was over, going into Bed, he was weigh'd, had a Poringer of Broth given him, and ſlept twelve or fourteen Hours together; and then being weigh'd again, he found by ſleeping only, and a Pint of Broth, he had gain'd in that time ſeven Pound. *Eſt in Aere occultus vitæ Cibus*, ſays *Coſmopolita*; That in the Air there is an occult ſort of Nouriſhment, that may ſupport Life. And this I am apt to think ſolves this pretty odd *Phænomenon*, as alſo that of Abſtinents; ſuch as neither eat nor drink for ſome Months. When the internal Spring is weak, and low, from the Center to the Circumference, and little or no Perſpiration, then may the Inſpiration of Air, not by the Lungs only, but the Pores of the whole Habit of the Body, be the greater to nouriſh and ſupport us.

CHAP.

CHAP. XI.

Of the Antiquity of Bath.

IT may not here be amiſs, I preſume, if I offer my Conjecture in the next place, concerning the Antiquity of *Bath*, and its Waters. As to the Waters, I am of Opinion, they are as old as the Creation, when the Waters were ſeparated from the dry Land: Providence deſign'd theſe, which continue to be recruited to this Day in the Bowels of the Earth, from their own proper Seeds, as all other natural things do, whether Animals, Vegetables, or Minerals.

Multaque ſunt ignis prope
Semina Corpus Aquai. Lucret.

But after all, I think it very probable, the *Romans* firſt built the Town for the ſake of the Waters they

they found there. Tho I can hardly allow the Honour of it, as ſome do, to *Julius Cæſar*, whoſe Conqueſts in *England* hardly extended beyond theſe Counties we now call the Home-Circuit. 'Twas uſual among the *Romans*, where'er their Conqueſts extended, to introduce their Cuſtoms, Laws, and Manner of Living: now Bathing being one of their chiefeſt Exerciſes, 'tis not unlikely they might bring in this among the reſt. For whatever Stories we may have of *Bladud* the *Necromancer*, ſaid to be Cotemporary with *Elias*, as the firſt Founder of theſe Hot Springs; by whoſe Art, as a profound Philoſopher and Magician, they were produc'd: wiſe Men think they are not only Apocryphal, but as mere a Fable and Romance, as that he alſo broke his Neck, preſuming to fly from *Apollo*'s Temple (now *Paul*'s) with artificial Wings and Spells of his own Contrivance. Nor is it to be ſuppos'd, that the *Britains* before *Julius Cæſar*'s time, were polite enough for ſuch Exerciſes,

ciſes, or artful Contrivances under-Ground: Eſpecially if it be true, what *Strabo* * ſays of them, who wrote about the time of our Saviour; That they lived wild in the Woods, with their Cattle; and tho they had a great deal of Milk, they had not Senſe enough to make a Cheeſe. Now that which ſeems to favour the Conjecture, that the *Romans* firſt built this Town, is, That there is a great deal of Artifice in the Foundation of it; and the *Romans* being very great Maſters of Architecture, as is well known, were much more capable of ſuch Contrivances, than I fear the old *Britains* were, at the time this Town was firſt built. And this is more probable, if it be true what *Solinus* ſaid of the *Fontes Calidi* in *Britain*, which the learned conclude to be the ſame with the *Thermæ* in *Ptolomy*'s Tables, who wrote before him, that they were *opiparo exculpti apparatu ad uſus Mortalium*; that they were

* *Lib.* 4.

hand-

handſomely contriv'd for common Uſe.

'Tis obſervable, the Town ſtands upon a Bog, the Ground is all made, and the Earth ſeems as if it were girded and kept in by the Walls; which in ſome places, particularly near the Walks, is twenty Foot higher than the Land without the Walls; which makes the Wall give way, and in ſome places look as if it would burſt: which is an Argument 'tis Artificial, not Natural Ground. And I am very much inclin'd to think, the *Romans* (who were very famous for their Aqueducts under Ground, according to *Vitruvius* *, who liv'd in *Auguſtus*'s time) have by ſome Contrivance of that kind, ſecur'd the main Spring, which preſerves the Waters pure from any Mixtures with other cold Springs; which are frequent all over the Town, and would ſoon ſpoil thoſe Waters, if

* Ductus autem aquæ fiunt generibus tribus, Rivis, per cunales ſtructiles, aut fiſtulis plumbeis, ſeu tabulis fictilibus. *lib.* 8. *c.* 8.

they

they communicated with them. That 'tis a Bog Dr. *Guidot* aſſures us, for digging not long ſince, he ſays, they came to mere Mud, and run a Soldier's Pike into it of a great length, without finding any bottom, but a warm, marſhy, ſulphurous Mud ſticking to the Pike. Now there are ſeveral cold Springs in this Town, moſt of which are brackiſh, and will not lather: But one I know at Mr. *Corniſh's* in the Grove, ſo ſoft and pleaſant, that it lathers well, and ſerves for all the Uſes of the Houſe. Now if the hot Springs had not been ſecur'd by ſome extraordinary Artifice from the cold ones, I am afraid they had hardly been preſerv'd unmix'd ſo long. 'Tis very remarkable, that notwithſtanding the many Fates and Revolutions *Bath* has met with in the many *Saxon* Wars; yet ſome of the *Roman* Stones have remain'd in the Walls, with *Roman* Figures, and *Latin* Monuments, very viſible and legible at this time.

To

To trace the Original of theſe Waters, and the firſt time of their Uſe, is to unravel the Creation. Very well we know, *Ptolomy*, *Antoninus*, and *Solinus*, are the firſt Authors who have mention'd theſe Waters; who all liv'd about 14 or 1500 Years ago. And nothing is more certain, than the Uncertainty of the time they had been in Uſe, before theſe Authors wrote.

That *Ptolomy* meant *Bath* by the ὕδατα Θερμὰ, in his Second Book and Third Chapter, is probable; becauſe, ſpeaking of *Britain*, he places it in 53 Degrees and 40 Minutes Latitude, not far from *Ilcheſter*; which he calls *Iſcalis*.

Antoninus, in his *Itinerary*, tells us, *Aqua-Solis* lies in the way from *Briſtol* to *Warminſter*, from whence it is diſtant about 16 Miles; which argues, that they meant both the ſame Place. And no doubt, but by the *Fontes Calidi*, in *Solinus* *, is meant

* Polyhiſt. *c.* 22.

alſo *Bath*, there being no hot Waters in *England* beſides.

Theſe are the firſt Names I find upon Record of *Bath*, among the Antients: by the *Britains* afterwards, and the *Welch* it had ſeveral Names; ſometimes they called it, as Mr. *Camden* obſerves, *Caer Ennaint*, the City of Ointment; then *Caer Badon*, afterwards *Caer Palluddur*, becauſe of *Minerva*'s Temple there, who was the Patroneſs of hot Waters: By the *Saxons* after them, *Bathanceſter*, *Hat Bathan Achmancheſter*, or the City of ſick Folks: And now, laſtly, by the *Engliſh*, called *Bath* or *Bathe*.

CHAP.

CHAP. XII.

Of the City of Bath, *and its Situation.*

IN the next place, give me leave to ſay ſomething of the City it ſelf, and its Situation. I know very well, at firſt ſight, a great many will be apt to condemn the Place as unhealthy; becauſe it ſtands low, and is encompaſs'd almoſt all round with high Hills, which hinders the free Paſſage of the Air to the Town; and by conſequence muſt be very injurious to the Health of the Inhabitants. That Air is a very great Ingredient of Life, without which we can ſubſiſt but a very few Moments; and that its free Paſſage into our Blood, is alſo abſolutely neceſſary to preſerve our Health; muſt be allow'd. But there are other Conſiderations to be weighed, before we come to a final deciſion of this

matter; for 'tis not always the healthieſt Situation, where the Air is moſt free and unconfined. It may bring with it ſome Particles raiſed at a diſtance from us, according to the nature of the Soil it paſſes over, that may be hurtful to our Conſtitutions, prey upon our Humours, and cauſe Diſeaſes in our Bodies. Now nothing is a more likely Cauſe of Peſtilences, or Epidemical Diſeaſes, than the Air being now and then impregnated with noxious Vapours, from ſome Mineral Effluvia out of the Earth: And not only the Cauſe of Peſtilential Conſtitutions, but from the ſubterranean Steams they bring with them, of almoſt all the Diſeaſes that afflict Mankind. The Honourable Mr. *Boyle* * is of this Opinion, when he tells us, That he thinks 'tis probable, that in divers Places, the Salubrity or Inſalubrity of the Air, conſider'd in general, may be in a good part due to ſubterranean Ex-

* *Salubrity or Inſalubrity of the Air*, p. 4.

pirations.

pirations. If this be true, why may not the Air, in ſome Places, abound with Particles from ſubterranean Effluvia, that may be of a benign Nature, and prolong Life? For my part, I am very inclinable to believe, that that Earth that can impregnate Waters with ſuch balſamick, healing, and agreeable Ingredients, as theſe hot Waters have, may alſo ſend up into the Air ſuch benign Effluvia, or Exhalations, as may have a kind Influence upon our Conſtitutions, and be the Cauſe of Health: For as ſome Exhalations are noxious, why may there not be others that may be wholeſom, when by the Air communicated to our Blood? And, moreover, if it be true, what Mr. *Boyle* ſays in the ſame Book, That ſubterraneal Effluvia contribute to Endemial Diſeaſes, not only as they vitiate the Air we breathe in, or are immediately touch'd by; but as they impregnate or deprave the Aliments Men feed on; as Water, Trees, Herbage, and Fleſh: Why may not other Places,

by the Kindneſs of their Soil, or mineral Subſtances in the Bowels of the Earth, impregnate our Aliments with ſuch balſamick Particles as may render them more wholeſom and of better Nouriſhment? But this being an Argument *à priori*, I ſhall inſiſt no more on it, but as a bare Probability; there being a better Argument for it *à poſteriori*, which I lay a greater ſtreſs upon, *viz.* That I have beheld more old healthy People in that City and the neighbouring Villages, in the Bottoms near *Bath*, than I have ever heard of any where elſe. Beſides, 'tis well worth our Obſervation to inquire, how few die every Year of thoſe that come to *Bath*, many of whom are almoſt dead when they arrive: As alſo how few Accidents we hear of, from ſuch Numbers and Crouds of People, from all ſorts of Airs and Counties: How kind all Endemial Diſeaſes are, when they happen in that Town, as Small-Pox, Fevers, and the like, very few dying in them. And I fancy, when any one has fully con-

conſider'd theſe things, he will be apt to think it reaſonable, with me, to attribute it in part, that the Place is ſo healthy, to the benign and balſamick Emanations or Effluvia; which from the Bowels of the Earth, ſtream through the Air, and ſo are communicated to our Blood, and are the Cauſe of Health, and long Life; and not, that all theſe kind Qualities are treaſur'd up in the hot Waters only. Upon the whole, *Bath* is the *Aſylum Chronicorum Morborum*, the common Sanctuary for all Perſons that labour under any Chronick Diſtempers; where Scurvies, Cachexies, and all other lingring Diſeaſes, may be cur'd, *citò*, *tutò*, *& jucundè*, by a Compoſition *Nature* has contriv'd, for the Benefit of Mankind; which exceeds all the Mixtures and Compounds Man has, or can invent. Compound Medicines conſiſting of Particles Heterogeneous, are not ſo adapted to the Conſtitutions of Mankind, as this Divine Compoſition; whoſe almoſt Homogeneous Nature, by an admirable

Contrivance of Providence, is not only fitted for all Ages, Sexes, and Temperaments, but by its never enough to be admired balſamick Virtures, is Nature's beſt Reſtorative, in order to recruit our radical Moiſture, when ſpent and conſumed; and alſo to preſerve the vital Flame, and native Heat, when it begins to be languid and faint, in order to reſtore us to an agreeable Health, or prolongation of an eaſier Life.

CHAP. XIII.

A Deſcription of the ſeveral Baths in Bath.

IN this City are three principal Baths, which tho not comparable, in Magnificence, with the Baths at *Rome*, which were much larger, and adorned with many marble Pillars, and curious Workmanſhip of Silver and Gold, ſtudded with great variety of precious Stones, which gave

gave their Baths a charming Luſtre; yet are built very convenient, kept clean, and in good Order.

1. The *King's-Bath.* This is the largeſt Spring and hotteſt Bath of all, which upon the turn of a Cock, the Guides can make hotter, upon Occaſion; and ſometimes I have known it too hot to be endured. In the middle of this Bath, under the Croſs, about two Foot under ground, is a Ciſtern of Lead, with its Mouth downward, in length about ſix Foot, and five Foot broad, and round about it large Stones; between which the Water riſes and bubbles up into the Bath, and fills it. Through this Ciſtern, by Pipes of Lead, are the Waters convey'd to both the Pumps for drinking. This Bath Dr. *Guidot* ſays, is about 57 Foot long and 40 broad. It has ſeveral Niches round it, with Seats for the Bathers to reſt themſelves in, and a large wooden Fabrick call'd, the Kitchin, where Bathers may ſit dry in wet Weather: there is alſo a private Pump for ſuch as have occaſion. This Bath is the

beſt, I take it, in all cold or old Aches, or pains in the Bones, ſcorbutick Rheumatiſms, Palſies, Cholicks, and moſt Diſeaſes in the ſolid Parts: which are more, perhaps, than the World, at preſent, will allow; who attribute all our Diſtempers to the Liquids and Humours in their proper Veſſels. By the help of this Bath the inteſtine Motion of the Blood is heightned; all its component Parts agitated and attenuated, ſo as to diſpoſe the Patient to plentiful Sweats, after in Bed; which are of great Uſe to ſuch as want that Evacuation.

The *Queen's-Bath* is but an Appendix to this Bath, parted from it by a Wall, and communicates with it by means of an open Paſſage, through which the Bathers paſs and re-paſs at pleaſure, according as they deſire a hotter or a colder Bath. This Bath having no Springs of its own, but receiving all its Waters from the *King's-Bath*, is not ſo warm as that is, and ſo may ſerve better where a more temperate Heat is required. It is of great

great Uſe to many, as a *Frigidarium* or at leaſt a *Tepidarium*; who having bathed in the *King's-Bath*, uſe to cool themſelves here a little, before they go to Bed, to prevent too great Heats, and ſweating too much. It is almoſt a ſquare 25 Foot long and 24 broad; it has a Croſs in the middle, ſupported by ſtone Pillars, convenient Seats round it, a private Pump, and a private Parlour, upon occaſion, to bathe in.

2. The *Hot-Bath*, ſo called becauſe once the hotteſt of all, as Dr. *Jones* * tells us it was in his time, tho not ſo at preſent; becauſe the *King's Bath* is hotter. So that this Bath may be uſed ſucceſsfully by ſuch, as could not bear the Degrees of Heat in the *King's-Bath*. Its length is between ten and eleven Yards, and its breadth between four and five. It has its Springs at the Weſt end, where the Well is; which ſupplies not only its own Pump, but that of the *Croſs-Bath* too. The Well is conveniently co-

* Baths Aid, *p.* 21.

vered

vered over with Stone, to prevent any Communication with the Water of the Bath. This Bath being ſo narrow, in proportion to its length, may be eaſily cover'd over, and made a cloſe Bath, as the Baths abroad are; which would be of great Uſe, not only in the Winter-time, but alſo in Summer, when the Weather is cold and windy. The *Hot-Bath* is 30 Foot and near half long, and 13 Foot broad.

The *Leper's-Bath* is but a part of this, divided from it by a firm Wall, and has not the leaſt Communication with it, but by a Hole in this Wall, through which the Water of the *Hot-Bath* paſſes into this; which has not Springs enough of its own, and is ſupply'd by the *Hot-Bath*. In this Bath poor People and Lepers bathe by themſelves, and have ſome ſmall Allowances from the Town and Strangers for their Subſiſtence, while they ſtay here. This *Hot-Bath* then, as it is next to the King's in its Heat, ſo in the Virtues too aſcrib'd to it, only may be of uſe to ſome Perſons, who

who are not able to bear the Degree of Heat in that Bath.

3. The *Croſs-Bath*, which is the moſt temperate of them all, and for that reaſon may be of very good uſe to Bathers. Many can't bear the Heat of the *King's*, or *Hot-Bath*, becauſe they occaſion Heats, and Fevers now and then; and various other Diſorders ariſe, from the irregular Uſe of thoſe Baths. All this may be prevented by the Temperature of this Bath, in which Hyſterical Women and Hypochondriack Men bathe often with good Succeſs. This Bath is much the ſame with the *Queen's*, as to its Degrees of Heat, but is to be prefer'd to it, becauſe it has Springs of its own, which the *Queen's* has not, and is the better Bath far; the reaſon of this Opinion I have given already. There is one thing not to be omitted here, that this Bath is particularly famous for the ſhrinking and contractions of the Nerves and Tendons. Many eminent Inſtances of Cures of this kind have fallen under my Care and Obſerva-

ſervation, and the Crutches, as *Votivæ Tabulæ*, were hung up for a Remembrance of the Cure; which I am apt to think will hardly ſucceed ſo well in any other Bath, becauſe of their too great Heat, which is apt to contract the Nerves. In the Year 1692, I was concerned for my Lord *Mordaunt*, then about 11 or 12 Years old, who had ſuch a Contraction of the Tendons of both his Hams, that he could neither go nor ſtand; and one Leg was longer than the other by about two Inches, and was thought incurable by the Phyſicians and Surgeons of *London*. He bathed only in this Bath, and in leſs than two Months was able to walk. Winter coming on, he went to *London*, and early in the Spring went down again by my Advice, and became perfectly cured that Summer, beyond all Expectation. His Brother, Captain *Henry Mordaunt*, about five Years ago, had a very great Contraction of the Muſcles of his right Leg and Thigh, from a Wound he receiv'd by a Cannon-Ball. He had tried

tried the *King's-Bath* for near three Months, without any Succeſs at all; being able to ſtand but on one Leg; but was perfectly cured in a few Months in the *Croſs-Bath.* This Bath is 24 Foot and a half long, and about 12 Foot broad.

There is one general Obſervation to be made on all the Baths, That the more temperate the Bath is, the longer time the Patient may ſtay in it, when he bathes, and the fewer Inconveniences attend it. Upon the whole, the Conſtitution of the Patient muſt be conſider'd; for many can bear the Temperature of the *Croſs-Bath*, that can't bear the Heat of any other. As to the time of going into the Baths; the Patient's ſtay there; which Bath beſt; how often to be repeated; and how long to be continued; all theſe depending upon the Conſtitution of the Patient, and the particular Caſe, cannot be determined but upon the Place: And theſe are to be well conſider'd, becauſe Errors and Miſtakes herein are of very ill Conſequence, and often fruſtrate

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us of the Benefit we expected by the Bath. But if theſe Circumſtances are rightly manag'd, the Patient gets great Advantage, and often finds a good Habit of Body ſucceeds the Uſe of the *Bath*-Waters. And herein the Wiſdom and Contrivance of Providence can never be enough admired, in ordering ſuch variety of Baths, which ſo differ from one another in Degrees of Heat, as to be able to anſwer all Conſtitutions of Patients that come hither for Cure. So that ſuch as are offended at the Heat of the *King's-Bath*, may uſe the *Hot-Bath*; and if that proves too hot too, the Temperature of the *Croſs-Bath* may ſuit their Caſe, and prove uſeful to them.

After all, I think all our Baths are ſupply'd from one and the ſame main Spring, and ſo only differ one from the other, according to the diſtance they are from it, or the indirect Paſſages through which they are conveyed. And this, perhaps, is the reaſon that Dr. *Guidot* met more of the Ingredients in the *King's-Bath*, than in either

either of the reſt; which may have dropt them in their longer way. All theſe Baths, not only keep the ſame degrees of Heat, in all Seaſons of the Year, as I ſaid before; but they alter not likewiſe in their Quantity in the moſt drying Summer, or the moſt dropping Winter that ever was known in the Memory of Man. By what Artifice the Antients uſed to ſecure theſe Springs ſo long, what part of the Town the main Spring lies in, or how the Waters are convey'd to the particular Baths; is altogether unknown to the Inhabitants of the Place. So that it is a traditional Religion among them, not to dig any where too deep, for fear of diſturbing or interrupting of the Springs; which would be attended with very ill Conſequences.

CHAP.

CHAP. XIV.

Of Cold Baths.

HOT and Temperate Baths there are at *Bath*, but no cold one at all; till of late, the Citizens of *Bath* have thought fit to ſet up ſuch a Conveniency, as that is, in ſome Caſes, and I believe will not find it any Prejudice to their other Baths. I know no Place where it may be practiſed with more Proſpect of Succeſs, than where the Hot Baths are too. For after a Courſe of Drinking and Bathing ſome time, the Blood is ſweetned, and the Skin cleanſed; nothing, in my Judgment, like the Cold Bath in many Caſes, to confirm the Habit of the Body, and invigorate the animal Oeconomy. Upon this account it may not ſeem at all abſurd, in writing of Hot Waters, and bathing in them, to add ſomething of cold Immerſion too in the laſt

laſt place. So much has been ſaid by Sir *John Floyer* and Dr. *Baynard*, concerning the Uſe of cold Immerſion, and the Philoſophical Reaſon of its manner of Operation in a great many Caſes, that little more can be added to that Subject. I was an early Favourer of cold Bathing my ſelf, when decried by many that underſtood little of Nature or Philoſophy: They thought Life conſiſted in a ſenſible and active Heat, and Death in a mere inſenſible Cold; all their fear was, that the Coldneſs of the circumambient Water of the Cold Bath, would extinguiſh the native vital Heat of our Blood: which proceeded from their Ignorance of what the antient Phyſicians had ſaid on this Subject, as well as the Reports of ſuch as have lived in cold Climates. I remember very well, about thirty Years ago, it was my Fortune to winter in the moſt Northern part of *Poland*, a very cold Climate, in the Latitude of 56 and 57 Degrees; where the Inhabitants were all of a ſtrong and luſty Conſtitution, had very

very hard Fleſh, and rarely ailed any thing; not ſo ſubject to Diſeaſes as ſuch who live in warmer Climates, whoſe Fleſh is looſe and ſubject to too much Perſpiration. I am very much inclined to believe, a great part of Mankind owe the Infirmities of their Conſtitutions to too great a Perſpiration, which is moſt evident in Hyſterick Women and Hypochondriack Men, the Fibres of whoſe Membranes are looſe: Having loſt their Tone, there is a greater Diſcharge made in the Habit of the Body; the Pores being more open, the Organs muſt be out of Tune, and flaccid for want of Recruits, proportionable to the Expence. And this, I take it, is the reaſon alſo, why ſuch Perſons are ſo very ſubject to Colds, Faintings, and Lowneſs of Spirit; which is their moſt frequent Complaint. And cold Water externally thrown on them, or internally taken, proves a better Cordial, by contracting the Membranes in the Habit of the Body, and checking this

this Expence, than any Recruits by Cordials of any kind. And this may be the reaſon of the great Increaſe of People in Northern colder Countries; who uſed to ſwarm, and then invade their warmer Neighbours for more Room and Subſiſtence: becauſe their Children being br[illegible] hardier, were not ſo obnoxious to Diſtempers and Death, as ſuch as were brought up more tenderly. The pooreſt in this Country eat, and ſleep in warm Stoves, where their Children ſeldom wear any thing but a Shirt till ſeven or eight Years old; whoſe Diverſion, I obſerved, was little elſe but warming themſelves by the warmeſt part of the Stove, and immediately after that, tumbling one another on the Snow. By this variety of Paſtime their Fleſh becomes as hard as Brawn, and they the better fitted for the Injuries of the bitter cold Weather they muſt endure, when they are expoſed to them, in the Courſe of their Lives afterwards. 'Tis this that ſecures them from Morti-

Mortifications, which would happen much oftner, were they not inured to theſe Hardſhips, when young, by hardning their Fleſh. This Misfortune happen'd, I remember, one day, travelling in *Pruſſia* on a Lake frozen over, to a Gentleman in our Company, a *Dantzicker* Merchant, who was of a ſudden frozen in both his Feet, ſo as not to be able to go or ſtand. Now the Method of Cure in this Caſe, is to apply Snow or Ice broken, rubbing the Part well with them; and this is a very ſevere Affliction, for they hardly allow ſuch as are in theſe Circumſtances the benefit of a Stove, whoſe Warmth haſtens the Mortification too faſt. Nor dare they apply any thing that is warm or ſpirituous to bathe it withal; becauſe the Fleſh then comes off from the very Bone like ſo much rotten Dirt. The cold Application preſerves the Tone of the Fibres of the Parts affected; and if their native Heat can diſſolve gently the coagulated Juices in their hollow Tubes, and render them fluid again, the Part

Part is preſerved; otherwiſe a Mortification follows. Whether it happen'd in this Caſe I know not, becauſe I ſaw not the Event of it; we parting Companies, left the Gentleman on the Road to *Koningsberg*, he not being able to travel with us. In this Journy, every three Hours, and ſometimes leſs, we refreſhed our ſelves in the warm Stoves of the People of the Country; who were ſo miſerably poor, that we were forced to carry our Proviſions for our ſelves and Horſes, for ſeveral days together. Now in theſe Stoves, at our firſt entrance, the Pores being much cloſed by the cold Air, we could hardly breathe; but in a few Minutes, when the heat of the Stove had rarefy'd our Blood, and open'd our Pores a little, we felt nothing at all. I mention theſe things only, that you may ſee of what uſe it may be to us, not to bring up Children tenderly; for the more healthy they'll be, and the more fit to bear Fatigues and Hardſhips afterwards. I muſt confeſs, ſuch is the Temperature

rature of our Climate, that cold Baths are not ſo univerſally good, as in the warm Regions of *Spain*, &c. where I have known a Glaſs of Water cool'd with Ice, and a piece of Ice held in a Man's Hand, like a Cold Bath, were Cordials; yet I have met with many in *England*, whoſe weak Habit of Body requir'd rather cold than hot Immerſion.

FINIS.